
PORPHYRY

INTRODUCTION

Translated, with a Commentary, by
JONATHAN BARNES

CLARENDON PRESS · OXFORD

CLARENDON LATER ANCIENT PHILOSOPHERS

*Series editors: Jonathan Barnes, Université de Paris IV–Sorbonne
and A. A. Long, University of California, Berkeley*

PORPHYRY

INTRODUCTION

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford ox2 6DP

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide in

Oxford New York

Auckland Bangkok Buenos Aires Cape Town Chennai
Dar es Salaam Delhi Hong Kong Istanbul Karachi Kolkata
Kuala Lumpur Madrid Melbourne Mexico City Mumbai Nairobi
São Paulo Shanghai Taipei Tokyo Toronto

Oxford is a registered trade mark of Oxford University Press
in the UK and in certain other countries

Published in the United States
by Oxford University Press Inc., New York

© Jonathan Barnes 2003

The moral rights of the author have been asserted
Database right Oxford University Press (maker)

First published 2003
First published in paperback 2006

All rights reserved. No part of this publication may be reproduced,
stored in a retrieval system, or transmitted, in any form or by any means,
without the prior permission in writing of Oxford University Press,
or as expressly permitted by law, or under terms agreed with the appropriate
reprographics rights organization. Enquiries concerning reproduction
outside the scope of the above should be sent to the Rights Department,
Oxford University Press, at the address above

You must not circulate this book in any other binding or cover
and you must impose this same condition on any acquirer

British Library Cataloguing in Publication Data
Data available

Library of Congress Cataloguing in Publication Data

Porphyry, ca. 234-ca. 305.
[Introduction. Greek]

Porphyry's Introduction/translated with a commentary by Jonathan Barnes.
p. cm.—(Clarendon later ancient philosophers)

Includes bibliographical references and index.

1. Philosophy—Introductions. I. Barnes, Jonathan. II. Title. III. Series.
b697.1582 E5 2003 186'.4—dc21 2002192558

Typeset by Hope Services (Abingdon) Ltd.

Printed in Great Britain

on acid-free paper by

Biddle Ltd.,
Guildford and King's Lynn

ISBN 0-19-924614-9 978-0-19-924614-4

ISBN 0-19-928869-0 (Pbk.) 978-0-19-928869-4 (Pbk.)

1 3 5 7 9 10 8 6 4 2

PREFACE

This book is based on a graduate seminar which I gave in Geneva in 2000/1; and it owes much to the comments of the participants—Maddalena Bonelli, Otto Bruun, Lorenzo Corti, Elena Gobbo, Giulia Lombardi, Angela Longo, Andreas Schmidhauser. Elena Gobbo also supplied me with penetrating written comments. Without the constant and cheerful support of my Assistants, Maddalena Bonelli and Andreas Schmidhauser, the work would not have been done. I am also indebted to Sylvie Germain, an impeccable librarian. I thank my colleagues Kevin Mulligan and Charles Genequand for bibliographical aid, and Catherine Barnes for zoological advice. Tony Long read a penultimate version of the book and made some valuable suggestions. An anonymous report done for the Clarendon Press was acute and unusually helpful. It is not because she compiled the indexes that the book is for Jennifer Barnes.

J.B.

*Ceaumont
March 2002*

CONTENTS

<i>Note on References</i>	viii
INTRODUCTION	ix
<i>Note to the Reader</i>	xxv
TRANSLATION	1
COMMENTARY	21
Additional Notes	312
Textual Notes	365
Porphyry's Remains	367
Bibliography	372
Glossaries	
Greek–English	385
English–Greek	389
<i>Index of Citations</i>	395
<i>General Index</i>	411

NOTE ON REFERENCES

References to the *Introduction* give a page-number (in bold type) and line-numbers in Busse's edition of the Greek text.

References to other works by Porphyry carry an abbreviated title and a set of numerals. They usually omit their author's name. Full details of editions etc are given in 'Porphyry's Remains'.

References to other ancient works generally consist of author's name, shortened (Latin) title, and an array of numerals. The numerals may refer to pages and lines (so for Alexander's commentaries), to volumes and pages (so for most of Galen), to pages and sections or to pages and columns and lines (so for Plato and Aristotle), to chapter and section and subsection (so for the majority of authors). This heterogeneity is unpretty—but it offers the easiest way of finding any quoted text.

References to the modern literature are given by author's name, abbreviated title, and page-numbers. Full titles and other details may be found in the Bibliography—except for those works marked with an asterisk, the details of which are in 'Porphyry's Remains'.

INTRODUCTION

For a thousand years and more, Porphyry's *Introduction* was every student's first text in philosophy. St Jerome learned his logic from it (*ep* 50 1). Boethius observed that 'everyone after Porphyry's time who has tackled logic has started with this book' (*in Isag*¹ 12.20–21). The *Introduction* was translated into Syriac, Latin, Armenian, Arabic. It maintained its standing throughout the middle ages, both in the Greek East (where it was also known by way of epitomes and paraphrases) and in the Latin West (where Boethius' translation was vastly influential); it informed the development of Arabic logic and philosophy; and it trailed a cloud of secondary literature, much of it in the shape of commentaries. Other philosophical introductions may have sold more copies: none has had—or is likely to have—a longer career.¹

Of its author little is known. In his *Lives of the Sophists and Philosophers*, written in about AD 400, Eunapius remarks that

no-one to my knowledge has written a life of Porphyry. Putting together what I have come across in my reading, this is what I have discovered about him. (*VS* III i 5 [455])

Eunapius did not discover much. Most of what he offers he took from Porphyry's own *Life* of Plotinus, which contains a number of auto-biographical touches; and it is likely that the rest—except what Eunapius borrowed from his imagination—derives from other Porphyrean writings.²

He was born in Tyre in Phoenicia, in 234.³ He was named 'Malcus', the Syriac word for 'king'. He later became 'Basileus', the Greek for

¹ On the later epitomes, paraphrases, handbooks, etc which draw on *Isag* see e.g. Roueché, 'Handbook'; three heterogeneous examples: John of Damascus, *dial* 5–12; Cassiodorus, *inst* II 8; scholia to Dionysius Thrax, *CG* I iii 115.20–119.18. On Boethius see below, p. xx n. 47; his work on the *Introduction* 'gave to the mentality of nations of Latin culture that rigorously logical structure which has remained their trade-mark' (Guzzo, *Isagoge*, p. 44—a monograph dated to the year XII of the Fascist era). On the Arabic side see e.g. Walzer, 'Platonism'; 'Furfuriyūs'; Gyekye, *Arabic Logic*. On the commentaries see below, p. xx–xxii.

² On Eunapius and the *VS*, see e.g. Goulet, 'Chronologie d'Eunape'; Penella, *Eunapius*, pp. 1–9; Goulet, 'Eunape', pp. 314–318. On the *Life* of Porphyry see Goulet, 'Mélancholie'.

³ 'His *Isagoge* . . . is a true child of the Syrian mentality' (Baumstark, *Aristoteles bei den Syrern*, p. 133); and others have uttered similar nonsense—on which see Millar, 'Porphyry'.

‘king’. And he was also known as ‘Porphyrius’, a common name in Tyre, the city of purple. As a young man, he removed to Athens, where he studied rhetoric, mathematics and philosophy with Longinus, the ‘living library and walking museum’ (Eunapius, *VS* IV i 3 [456]). In 263 he migrated to Rome and joined the magic circle of Plotinus. Porphyry was enchanted. He became a fervent and favoured acolyte of Plotinus. But he remained with him for no more than five years: in 268 he fell sick with a melancholy and Plotinus urged him south to Sicily for his health’s sake.

In 270 Plotinus died. Later, Porphyry returned to Rome, where he lectured on his master’s philosophy—and where, in 301, he made public his edition of Plotinus’ *Enneads*. When, and for how long, he was back in Rome we cannot tell; nor is it known when he visited North Africa (where he stayed long enough to befriend a partridge). Late in life he married (and not for love). In a letter to his wife Marcella, he explains that he must leave her to look after ‘the interests of the pagans’ (*ad Marc* iv): some have inferred that Porphyry, an enemy of Christianity, was summoned to the imperial capital to advise the persecuting Emperor Diocletian.

The date and place of his death are unknown.⁴

Porphyry was never the head of a philosophical school;⁵ but he had pupils and he did not hide his thoughts. We hear of some sixty works, on a variety of subjects. The surviving œuvre includes the *Introduction* and the moralizing *Letter to Marcella*, a commentary on Aristotle’s *Categories* and a commentary on Ptolemy’s *Harmonics*, a *Life of Pythagoras* and a *Life of*

⁴ For the names ‘Malcus’ and ‘Basileus’ see *v Plot* xvii 6–15 (for ‘Porphyry’ see Eunapius, *VS* IV i 4 [456]). For the chronology: *v Plot* iv 1–2 (‘in the tenth year of the reign of Gallienus, I, Porphyry, left Greece for Rome’); iv 6–9 (‘Plotinus was about 59 in the tenth year of the reign of Gallienus; it was then that I, Porphyry, first met him, being 30 myself’); vi 1–3 (‘I retired there [i.e. to Sicily] in the fifteenth year of the reign of Gallienus’)—cf Goulet, ‘Système chronologique’. On Longinus see Brisson, ‘Noms propres’, pp. 91–96; Brisson and Patillon, ‘Longinus’; Kalligas, ‘Longinus’ library’. On Plotinus’ circle see Goulet-Cazé, ‘Arrière-plan’, pp. 231–276. (Porphyry celebrated Plato’s birthday with Plotinus (*v Plot* xv 1–6) just as he had done in Athens with Longinus (*philolog* 408 = Eusebius, *PE* X iii 1)—on Plato’s birthday-parties see Riginos, *Platonica*, pp. 15–17; Dörrie and Baltes, *Platonismus* II, p. 238).—Texts and documents pertinent to Porphyry’s life are collected in Smith, *Fragmenta**, items 1–43; see e.g. Bidez, *Vie*; Beutler, ‘Porphyrios’, cols 275–278; Smith, ‘Studies’, pp. 719–722.

⁵ Tricot, *Isagoge**, p. 5, says that ‘in 270 Porphyry succeeded Plotinus as head of the School of Rome’ (so too e.g. Maioli, *Isagoge**, p. 7—and a dozen other scholars): Plotinus was not the head of a school; nor is there any evidence that Porphyry founded a school of his own.

Plotinus, an essay *On Abstinence* and a set of metaphysical aphorisms and an allegorical interpretation of a passage in Homer.⁶ There were also commentaries on other Aristotelian works, and commentaries on Plato. There were writings on philology and on rhetoric, on geometry and on grammar. Of the fifteen books of Porphyry's most notorious production—the treatise *Against the Christians*—there remain a few fragments and a mass of Christian abuse.⁷

To some of these writings a date can be assigned. Not so for the *Introduction*. A passage in an ancient commentary says that the essay was written while Porphyry was in Sicily:⁸ some have accepted the information—and inferred a date shortly after 268. In truth, the passage is of dubious value, and the inference is shaky—we have no idea how often Porphyry visited Sicily, or how long he stayed there. It is plausible to suppose that the work was written after Porphyry had come to Rome; for it is addressed to a Roman. Anything more is fancy.⁹

Of Porphyry's other writings, the most pertinent to the *Introduction* is the commentary on the *Categories*, a work modest in length and in pretension.¹⁰ Porphyry wrote a second commentary on the *Categories* which ran to seven books: a few extracts are preserved in Simplicius' commentary on Aristotle's work; and Dexippus' collection of *Questions and Answers* on the *Categories* made extensive use of it.¹¹ Boethius' *On Division* should also be mentioned; for the essay was based on—indeed,

⁶ None of these works save *Isag*, *v Plot*, and *ant nymph* has survived intact.

⁷ Lists of Porphyry's works in Bidez, *Vie*, pp. 66*-73* (77 titles); Beutler, 'Porphyrios', cols 278–302 (68 items); Smith, *Fragmenta**, pp. L–LIII (76 items).

⁸ Ammonius, in *Isag* 22.12–22 (quoted below, p. 23); later commentators repeat the geographical information.

⁹ Saffrey, 'Pourquoi Porphyre', makes the shaky inference. He also suggests that Porphyry left Rome for Sicily not because of illness but on account of an intellectual bust-up with Plotinus: Plotinus had attacked Aristotle's *Categories* (below, p. 336); shocked and dismayed, Porphyry broke with his master, migrated to Sicily, and set himself to defend Aristotle against Plotinus. This theory—anticipated by Evangelioi, *Aristotle's Categories*, pp. 3–5, and accepted by de Libera, *Isagoge**, pp. viii–x (cf 'Aristote et Plotin', pp. 9–10)—is whimsy. Porphyry tells us why he left Rome: he was contemplating suicide; Plotinus told him that he was suffering from a 'melancholic' disease, and urged him to take a holiday; he was persuaded, and went to Lilybaeum—where he kept in touch with Plotinus and received copies of his latest work (*v Plot* xi 11–19; cf vi 1–4; Longinus, *apud Porphyry*, *v Plot* xix 11–13). There is no reason to think that Porphyry had forgotten his own past—or that he was lying through his teeth.

¹⁰ The Greek text is incomplete. Boethius, in *Cat*, relies heavily on it (see 160A); and the last part of this work contains otherwise lost Porphyrean material—see Bidez, 'Boèce'.

¹¹ Dexippus' in *Cat* 'adds pretty well nothing to what Porphyry and Iamblichus have said' (Simplicius, in *Cat* 2.28–29; cf Dexippus, in *Cat* 5.7–12); and Iamblichus 'in many places follows Porphyry even to his very expressions' (ibid, 2.10–11). Only the first two and a quarter books of Dexippus' work survive, perhaps a third or a half of the total.

largely translated from—a Greek original, and in all probability the original was the introduction to Porphyry's commentary on Plato's *Sophist*.¹²

In philosophy Porphyry was a Platonist, and in general a Plotinian Platonist—although on some issues he disagreed with his master. Since the *Introduction* in principle avoids deep questions (1.9–14), and since in fact deep issues rarely trouble the text, Porphyry's philosophical notions need not be rehearsed here. Fortunately so; for, despite his vast learning and his unusual critical acuity, Porphyry had a weakness for fudge.¹³

The *Introduction* occupies itself with five sorts of item: genera, species, differences, properties, accidents; and mediaeval authors frequently refer to the work as *Quinque Voces* or *The Five Words*.¹⁴ As a title '*The Five Words*' is not inept: in particular, it marches well with 1.9–14, where Porphyry proposes to discuss his five items 'from a logical point of view'.¹⁵ Support for the title has been found in the rubric to § 6: 'On what the five words have in common' (13.9). But the authenticity of the rubrics is dubious.¹⁶ And in any event, the ancient title of the work was not '*The Five Words*' but '*Introduction* [Εἰσαγωγή]': so the Greek manuscript tradition, so Boethius' Latin translation, so the ancient commentators (e.g. Ammonius, *in Isag* 20.21–22; Boethius, *in Isag*¹ 4.13; 15.1–3).¹⁷ To be sure, this title might have been invented on

¹² On Boethius' *div* see Magee, *Boethii* (for the link with Porphyry see pp. xxxiv–lvii); cf id, 'Boethius'.

¹³ On Porphyry's philosophy see e.g. P. Hadot, 'Métaphysique'; id, *Porphyre*; Lloyd, 'Later Neoplatonists'; Smith, *Porphyry* (but the scope of the work is narrower than its title suggests); id, 'Studies'. For Porphyry's views on logic see Lloyd, 'Neoplatonic logic'; Ebbesen, 'Porphyry's legacy'; Evangelioi, *Aristotle's Categories*; Lloyd, *Analogy*, pp. 1–75.

¹⁴ First, so far as I know, in Trophonius, *proleg* 8.21–22; cf 9.23 (but at 12.8 he refers to the work as '*Introduction*'); for Trophonius' date—6th century or earlier—see Rabe, *Sylloge*, p. xxiv.—According to [Elias], the title was Porphyry's own: 'He refers to the present work where he says that "we have said so also in the treatise on the five words"' (*in Isag* xxvii 10). No scholar has taken the citation to be authentic.—The ancient commentators use such formulae as 'the doctrine of the five words' (e.g. Probus, *in Isag* 148.8, and often; David, *in Isag* 83.10–13, and often; [Philoponus], *in Isag* 10a33–34, and often). Boethius talks rather of 'the five things [res]' (e.g. *in Isag*¹ 10.17; *in Isag*² 348.2).

¹⁵ See e.g. Ammonius, *in Isag* 20.15–21, quoted below, p. 36. *Contra de Libera, Isagoge*^{*}, p. xlII, who urges that '*The Five Words*' is an impossible title—had Porphyry referred to genera and the rest as 'words', he would thereby have closed the question which 1.9–14 explicitly leaves open.

¹⁶ See below, p. xvii. The term 'word [φῶνή]' does not appear at all in the text of the *Introduction*.

¹⁷ For the history of the title see Busse, *Isagoge*^{*}, p. v n. 1; Minio-Paluello, *Isagoge*^{*}, pp. xii–xiv.—The anonymous Syriac commentator takes '*Introduction*' to be a title imposed by the commentators: *in Isag* 228.20–23; so too, apparently, Zekl, *Einleitung*^{*}, p. lIII n. 115.—The Suda's catalogue of Porphyry's writings includes: 'On genus and species and

the basis of a phrase at 1.7–8: ‘in the manner of an introduction’; and Porphyry himself nowhere refers to the essay under any title. However that may be, I shall refer to the work as the *Introduction*.¹⁸

An *εἰσαγωγή* is a bringing in, an importing, an introducing—literally, of goods; and by transfer, of notions.¹⁹ Hence an introductory text.²⁰ And in the ancient world such texts were legion—for example, Aulus Gellius says that ‘when I wanted to be initiated into the logical disciplines, it was necessary to approach and master what the logicians call *εἰσαγωγαῖ*’ (XVI viii 1).²¹ An *Introduction to X* might offer material preparatory to a study of X²² or (more usually) an elementary account of X or an account of the elementary aspects of X. And X might be a subject, or an author, or a work. Porphyry’s work is introductory in both ways: he expressly states that it will avoid deep matters (so that it is introductory in the second way); and he expressly states that it will deal with material which must be mastered before certain other subjects are attacked (so that it is introductory in the first way).

difference and property and accident’ (s.v. *Πορφύριος*)—no doubt the *Isag* (note Boethius, *in Cat* 187D: ‘Porphyry, in the book about genera, species, differences, properties, and accidents, . . .’).—Two questions may be distinguished: (1) what label did the author, and then the ancient copyists, attach to the beginning or end of the work? (2) How did the author, and others, refer to the work? The answer to (2) is, usually: ‘In a variety of ways’. The answer to (1) is, often: ‘We do not know’. On ancient titles see e.g. Barnes, ‘Catalogue’.

¹⁸ Sometimes in English and often in French the work is referred to as the *Isagoge*: ‘isagoge’ is simply a transliteration of the Greek ‘εἰσαγωγή’. (For ‘isagoga’ in Latin see e.g. Gellius, I ii 6.)

¹⁹ Thus ‘the introduction of the Forms’ into philosophy: Aristotle, *Met* 987b31.

²⁰ ‘What is an isagoga?’—An *isagoga* is an introduction of the subject together with an exposition of the first theories . . . ([Soranus], *quaest med* 21 [251.8–9]).

²¹ Cf e.g. Sextus, *M* VIII 428 (Stoic introductions to logic); Epictetus, *diss* II xvi 34, xvii 40; Plutarch, *soll anim* 961c = Porphyry, *abst* III 22 (Stoic introductions to philosophy); *rat* and 43F (introductions by sophists); Galen, *syn puls* IX 431–432; *meth med* X 53; *in Hipp* XVIIIb 632 (introductions to medical topics); Philodemus, *rhet* [PHerc 1004, LXXII 3–5] (rhetoric); Aelian, *tact* i 2 (tactics); Jerome, *ep* cxxi 10 (‘music and dialectic have their εἰσαγωγαῖ’). Related terms: *ὑποτύπωσις*, *ὑπογραφή* (below, pp. 57–59), *σύνοψις*, *ὑφήγησις*, *στοιχείωσις*, . . . or you can add ‘τοῖς εἰσαγομένοις’ to the title; Galen, *lib prop* XIX 11; cf Porphyry, *in Ptol harm* 22.23; 23.24.—On ancient introductions see Norden, ‘Literaturgattung’, pp. 508–526; Schäfer, ‘Eisagoge’; Asper, ‘Struktur’ (but the features which these scholars distinguish do not characterize Porphyry’s *Introduction*, and I doubt if ancient introductions form a genre or *Literaturgattung*); and more generally Fuhrmann, *Lehrbuch*; Mansfeld, *Prolegomena*; *Prolegomena Mathematica*.

²² And so a *πρόλογος* (perhaps the ancient title of Albinus’ *Introduction to Plato’s Dialogues*: Mansfeld, *Prolegomena*, p. 98 n. 158), or *προλεγόμενα* (see Alexander, *in Met* 172.19–21).

To what is the *Introduction* introductory? Numerous works carry the title ‘*Introduction*’,²³ but there is usually an explanatory modifier attached—an adjective, as in Galen’s ‘*Dialectical Introduction*’ or Nicomachus’ ‘*Arithmetical Introduction*’, or a prepositional phrase, as in Porphyry’s own ‘*Introduction to Astronomy*’ or his ‘*Introduction to Ptolemy’s Astrology*’ (Suda, s.v. *Πορφύριος*). Porphyry’s *Introduction* carries no modifier. This fact puzzled some ancient readers;²⁴ and the puzzle was frequently resolved by saying that the *Introduction* is an introduction to the study of Aristotle’s *Categories*. So Ammonius, more than once (*in Isag* 20.15–21; 22.23–24; 24.16–17). So Boethius—in the first of his two commentaries he announces that he will discuss ‘the *Introduction*, that is to say, the introduction to Aristotle’s *Categories*’ (*in Isag*¹ 4.12–14), and in the second he remarks that ‘by the title Porphyry indicates that he is writing an introduction to Aristotle’s *Categories*’ (*in Isag*² 143.11–12; cf. 146.27–147.1).²⁵ The best modern commentary on the *Introduction* argues that this traditional interpretation is correct—and its accompanying translation carries the title: ‘*Introduction de Porphyre aux Catégories d’Aristote*’.²⁶

²³ The earliest known examples seem to be those in the list of Chrysippus’ writings: Diogenes Laertius, VII 193, 195, 196 (eight titles); cf. Athenaeus, 150b; Sextus, *M* VIII 223.

²⁴ See Ammonius, *in Isag* 23.1–12 (the puzzle ascribed to *τινέσ*); Elias, *in Isag* 38.34–39.3.—Paul of Alexandria’s work on astronomy is sometimes referred to as ‘*Introduction*’ (Dorotheus, frag 13 [326.2]; anon summary, in Boer’s edition of Paul, XXI 6–7; scholia, *ibid* 124.32); on the basis of *praef* 1.6–7 Boer takes ‘*εἰσαγωγικά*’ to have been Paul’s own title.—In the pseudo-Galenic *Εἰσαγωγὴ ἡ ἵατρος* the alternative title functions as a modifier (and the original title was perhaps just ‘*ἵατρος*’: Galen, *lib prop* XIX 8–9).—Perhaps Theudas’ *Εἰσαγωγή* is a genuine parallel (Galen, *lib prop* XIX 38)? But note that at *in Ptol harm* 25.3–4, Porphyry refers to what ‘Ptolemais of Cyrene wrote in her introduction’—yet the title of her work, as we know from *ibid* 22.23–24, was ‘*Pythagorean Elements of Music*’.

²⁵ In both commentaries the Latin is formally ambiguous between ‘Aristotle’s *Categories*’ and ‘Aristotle’s *predications*’ (see also below, p. 25); but it is plain that Boethius meant to refer to Aristotle’s work rather than to his theory. See also *in Isag*² 348.1–3 (‘here we end our long work which contains a discussion of the five things and suberves the *Categories*’); but *div* 876D perhaps refers to *Isag* as an ‘introduction to Aristotle’s *predications*’ rather than to ‘Aristotle’s *Categories*’.

²⁶ De Libera, *Isagoge*^{*}, pp. xii–xxvii. For the French title see p. CXLIII—and the head of every page of the translation. De Libera states that ‘the *Isagoge* is nothing but an introduction to the *Categories*’ (p. xiii); more particularly, if we ask to which body of doctrine the *Isagoge* is intended to introduce its readers, ‘we may reply without hesitation: The complex formed by a certain number of theoretical claims in *Cat* 1, 2, 5 and 8, and, at the heart of this complex, chapter 5 itself—in other words, the theory of *οὐσία*’ (p. xiv). Indeed, ‘this results plainly from the first lines of the Preface’ (p. xiii n. 20).—Similarly, the German translations of Apelt and Zekl both give the title as ‘*Einleitung in die Kategorien*’. See also e.g. Tricot, *Isagoge*^{*}, p. 6 (*Isag* ‘as its title indicates, is an *Introduction* to the *Categories*’); Girgenti, *Isagoge*^{*}, pp. 16–17 (who appears to take *Isag* as the first of

The traditional interpretation is wrong. The *Introduction* is not in the least like the several ancient texts which are genuinely introductions to this or that work.²⁷ In any case, Porphyry himself indicates for what study the *Introduction* provides preparatory material: not for a study of the *Categories*, but for a study of the theory of predication, and the construction of definitions, and, in general, matters connected with division and with proof (1.3–6). That is to say, Porphyry presents his essay as a preparation for the study of logic.

Students of philosophy in late antiquity generally started with logic; and students of Platonic philosophy started with Aristotelian logic—and so with Aristotle's *Organon*. The *Categories* was established as the first book of the *Organon*;²⁸ so that

it is a preface to the whole of philosophy—since it is the starting-point of logic and logic is rightly taken before the whole of philosophy. (Simplicius, *in Cat* 1.4–6)

Porphyry's essay, written as an introduction to the study of logic, was thereby an introduction to philosophy—and hence accidentally an introduction to the *Categories*. But it is not an *Introduction to the Categories*.

Ammonius' commentary on the *Introduction* is addressed to students who are beginning their philosophical studies (*in Isag* 1.1–5); and when, after several pages of waffle, he finally turns to Porphyry, he observes that

he entitled the book 'Introduction' because it is a path to the whole of philosophy. (*in Isag* 20.21–22)²⁹

Porphyry's three commentaries on *Cat*.—The story of Chrysorius (below, p. 23) also supposes that *Isag* was written as an introduction to *Cat*.

²⁷ 'Rarely has an introduction had so little pertinence to the text it is supposed to introduce than has the *Isagoge* to the *Categories*' (Zekl, *Einleitung**, p. LIV). Elias observes that 'some say that his purpose is to make clear what has been obscurely said in the *Categories*' (*in Isag* 41.18–19)—and briskly dismisses the opinion.

²⁸ The standard explanation for this can be found e.g. in Boethius, *in Isag* 1 12.18–14.7; Simplicius, *in Cat* 14.25–15.25; cf. e.g. Bodéus, *Catégories*, pp. xi–xxiii.—Most MSS which transmit Aristotle's logical works begin with *Isag* and then turn to *Cat*.—For the origins of the *Organon* see Solmsen, 'Boethius'; Brunschwig, 'Organon', pp. 482–488.

²⁹ Cf. e.g. David, *in Isag* 92.7–8; anon, *in Isag* I 36; II 2; Zekl, *Einleitung**, pp. LVI, LXIII. The later commentaries on the *Introduction* are written as first courses in philosophy: they standardly start with some reflections on the nature of philosophy, its utility, and so on—and then turn to *Isag*. Isidore reports that 'before they turn to an account of the *Introduction*, the philosophers usually give a definition of philosophy . . .' (*etym* II xxiii 3). Isidore gives such a definition in xxiv, a summary of *Isag* in xxv (taken from Marius Victorinus: see P. Hadot, *Victorinus*, pp. 185–186), and then an account of *Cat* in xxvi.—Ammonius, *in Isag* 23.3–7, says that *Isag* is called 'the Introduction' in the way in which

[Elias] elaborates: there was a disagreement over the aim of the *Introduction*, three theories being championed: the study of the five items is an end in itself, or an introduction to the types of predication, or an introduction to the whole of philosophy (*in Isag* xxv 3–5). [Elias] agrees that the work is useful for the whole of philosophy—but indirectly, inasmuch as it is useful for logic and logic is useful for the rest of philosophy (*ibid* xxvi 1–3); and he concludes that

the present treatise is an introduction and an entrance to logic. (*ibid* xxxvii 12)

He is right.³⁰

The *Introduction* is a first text in philosophy. It is not a protreptic—it was not written to commend the study of philosophy; and a modern reader who expects a foretaste of the delights of Dame Philosophy will be disappointed. Nor is it wholly felicitous as a first text.³¹ Although it is generally elementary, and sometimes creakingly so, it is here perplexingly brief and there vexatiously allusive. It takes for granted a certain amount of technical jargon; it contains a few cryptic allusions to Platonic and Aristotelian theories; and its organization is not beyond cavil.³²

The general structure is clear: after a brief Preface, which explains what and why the *Introduction* is, the work divides into two parts. The first part takes in turn the ‘five words’—genus, species, difference, property, accident—and explains what each means. The second part states what all five items have in common and then considers each possible pairing of the five: What do genus and difference have in common? and what marks them off one from the other? What do genus and species

Homer is called ‘the poet’—you do not need to say ‘the poet Homer’ since Homer is the outstanding poet, and you do not need to say ‘*Introduction to Philosophy*’ since philosophy is the best of subjects (cf. e.g. anon., *in Aphth progymn* 78.1–6). The anonymous Syriac commentator also appeals to Homer—and to Paul ‘the apostle’; but he makes a better use of the parallels—you do not need to say ‘*Introduction to So-and-so*’ since *Isag* is the outstanding introduction (*in Isag* 228.20–23).

³⁰ Among modern scholars see e.g. Oehler, ‘Neue Fragmente’, pp. 225–226; Evangeliou, ‘Aristotle’s doctrine’, pp. 26–29.

³¹ Pace Lloyd, ‘Later Neoplatonists’, p. 281 (‘In fact, Porphyry’s *Isagoge* and his commentary on the *Categories* are admirable introductions to the concepts of Aristotelian logic’); or Zekl, *Einleitung**, p. LXIII (‘There is no better introduction’ to Aristotle’s philosophy than *Isag*). Contrast Prantl’s view of ‘Porphyry’s extraordinarily silly little compendium’ (*Geschichte der Logik*, p. 627): Porphyry was ‘by far the most influential corrupter of logic’ and the success of *Isag* explains why later philosophers ‘shut their eyes and ears against a correct understanding of logic’ (*ibid*, p. 626).

³² But ancient readers of *Isag* went through the text with a master; and some of its terminology will have been familiar to them from their schooling in grammar and rhetoric.

have in common? and what marks them off one from another? And so exhaustively on.³³

The second part is scatty in its selection of common and proper features; and although it adds some novelties, it also repeats material from the first part. (So David, in *Isag* 211.24, accuses Porphyry of *ἀδολεσχία* or repetitiveness.) The first part is ill proportioned: species and difference are each given twice as much space as genus; and genus gets as much as property and accident combined. It is hard to discover any rhyme in this: on the one hand, Porphyry's remarks about species contain repetitions, and on the other hand he says too little about properties and far too little about accidents.³⁴

After the Preface, the text is traditionally cut up into twenty-six chapters or sections, each carrying a rubric or subtitle. Up to 13.9—the beginning of the second part—the subtitles are transmitted in the same form (with one or two trifling variants) by all our witnesses to the text. From there on, there are substantial differences, which seem to derive from two distinct traditions. Comparable rubrics are found in many ancient texts: in some cases they are original, in others they are later accretions.³⁵ Are the rubrics in the *Introduction* original? The question is ticklish; but it concerns literary history, and no philosophical or exegetical issue is touched by it.³⁶ I incline to think that the rubrics are

³³ Some ancient commentators divided the work into three parts, 13.9–21 constituting section II. A parallel tripartition is found in Boethius, *div* 878b, and often in late handbooks (e.g. anon, in *Hermog stat* 218.10–228.19).

³⁴ Asper, 'Struktur', p. 325, speaks of 'the perfect symmetry' of Porphyry's exposition, and refers to its 'dialectic structure'. His text must be different from mine.

³⁵ Some of the MSS of Porphyry's in *Cat* have rubrics (see 68.4; 69.1 [app crit]; 88.1; 100.10; 127.1; 141.5): Busse rightly takes them to be later additions. The rubrics in the unique MS of Galen, *inst log*, peter out after a few pages; Apuleius' *int* has sporadic rubrication in some MSS—in neither case is it plausible that the rubrics go back to the author. On the other hand, Columella (XI 65) and Aulus Gellius (praef 25) vouch for the authenticity of their chapter headings (though Columella speaks rather of a Table of Contents); and Porphyry himself added rubrics to his edition of Plotinus (v *Plot* xxvi 32–36; cf Goulet-Cazé, 'Arrière-plan', pp. 315–321).—Note also in *Cat* 127.22–25: 'Why did Aristotle entitle <this section> 'On quality and what is qualified'?—Some [Achaicus and Alexander: Simplicius, in *Cat* 208.4–7] say that the rubric is not his; for he did not add such things for the other types of predication but discusses each one without any rubric.' Strange, *Porphyry*, p. 138 n. 420, comments: 'This shows that ancient manuscripts of the *Categories* were provided with chapter titles'. It shows that—before Porphyry's time—some MSS of *Cat* contained a lone subtitle. Ammonius' copy of *Cat* had at least the two subtitles, 'περὶ οὐσίας and 'περὶ τῶν πρός τι' (in *Cat* 66.14–19; cf 80.18; 81.2–3). Philoponus, in *Cat* 133.21–23, took every section to have its proper rubric. See also Boethius, in *Cat* 239c; and esp Simplicius, in *Cat* 207.27–208.21.—For the general question see e.g. Birt, *Buchwesen*, pp. 157–159; Mansfeld, *Prolegomena Mathematica*, pp. 128–129.

³⁶ Pace de Libera, *Isagoge**, pp. XLII–XLIII; p. 62, n. 101.

not Porphyry's, and I have omitted them from the translation. (The seventeen rubrics which divide the English do not form part of the translation.³⁷)

Porphyry does not claim originality for the *Introduction*. On the contrary, he says that he is going to set down what 'the old masters, and especially the Peripatetics among them' (1.14–16) have said on the subject; and he frequently refers to what 'they' say or think.³⁸ It was a convention of the age to disclaim novelty. But it was also a practice of the age to copy the past. Longinus, referring to his contemporaries, says that 'some produced nothing more than summaries and transcriptions of what had been put together by the old masters' (*apud* Porphyry, *v Plot* xx 57–59). Porphyry reports that in his *Harmonics* Ptolemy copied out 'most, if not pretty well everything, from the older masters', adding that

no-one will blame him for this, since everyone uses what has been well said as though it were common property. (*in Ptol harm proem* 5.8–9, 15–16)³⁹

Porphyry says this in justification of his own procedure in the commentary on Ptolemy: to save time, he will make copious use of his predecessors, often without naming them; for 'Hermes is common', it is vanity to pretend to originality, and it would be best if 'as Socrates said [Plato, *Symp* 221E], everyone said the same things about the same things in the same way' (*ibid* 4.24–5.8). Similarly, in *On Abstinence* he will discuss the psychology of animals 'making a short epitome of what is said by the old masters' (III 1). One of the masters was Plutarch, as Porphyry notes in § 24; but he does not note that in §§ 21–24 he has copied down—with a few modifications—a dozen pages from Plutarch's essay on *The Intelligence of Animals* (959F–963F).⁴⁰

³⁷ My § 0 corresponds to the traditional Preface, my §§ 1–6 answer to the traditional §§ 1–6, and my §§ 7–16 match the ten pairs of sections which make up the traditional §§ 7–26.

³⁸ 'He was a man of compromises, at least as far as expression goes. Hardly a single piece of new terminology can be shown to be of his making, and hardly a single piece of theory can be demonstrated to originate with him. What he did was to accept what everybody accepted and give some pieces of doctrine a twist so as to fit into the rest' (Ebbesen, 'Porphyry's legacy', p. 171—echoing Bidez, *Vie*, p. 133). An exaggeration if applied to Porphyry's œuvre as a whole, but spot on for the *Introduction*.

³⁹ The last sentence of Cleomedes' *Caelestia* is this: 'These lectures do not contain the opinions of the writer; rather, they have been assembled from various treatises, both old and recent—and much of what has been said is taken from Posidonius.' (ii 7). To be sure, several scholars have doubted the authenticity of this confession.

⁴⁰ Similarly, *abst* II transcribes a dozen pages from Theophrastus' lost essay *On Piety* (frag 584A); and in *Ptol tetrab* was largely transcribed from earlier writers (see Boer and Weinstock, *in Ptol tetrab**, p. 187).

Is the *Introduction* a patchwork of quotation and paraphrase? The Ammonian commentary asserts that Porphyry ‘put together the contents from what Plato and Taurus had said, using almost their own words’ (*in Isag* 22.20–22). Elias asserts that ‘this work is a compilation’ of material from Aristotle’s *Topics* (*in Isag* 79.11; cf 90.16–17). Modern scholars have made similar affirmations.⁴¹ None has any plausibility. To be sure, Porphyry was vastly learned—‘the Phoenician is a polymath’, the Delphic oracle said (David, *in Isag* 92.5).⁴² To be sure, in the *Introduction* he sometimes quotes or paraphrases a sentence or two from Aristotle without saying that he is doing so; and there are tacit allusions to Platonic texts. But he was soaked in Plato and soaked in Aristotle; and he ‘alludes’ to them as an educated Englishman ‘alludes’ to Shakespeare and the Authorized Version. But it is compatible with everything we know—and it is inherently probable—that the *Introduction* was written from Porphyry’s own head, from his reading and his memory: it was not laboriously cut and pasted from ancient scrolls.

In any event, the stuff of the *Introduction* comes from the Peripatetic school, and the ideas which it contains have a Peripatetic origin. But if the work is Peripatetic, it is so only in the blandest of manners. There is little in it that a Stoic could not accept—and nothing that a Platonist should not accept. It is written in the philosophical lingua franca of the period. Here and there scholars have detected, say, a Stoic term and inferred a Stoic influence. The inference is always invalid, and the detective work usually amateur: some of the words which Porphyry uses had perhaps been introduced into the philosophical domain by Stoic thinkers for Stoic ends; but by Porphyry’s day such immigrants had been thoroughly integrated, their remote origins forgotten.⁴³

The *Introduction* being a popular work, it is not remarkable that we possess a rich and various testimony to its text.⁴⁴

First, there are the Greek manuscripts, more than 150 of them.

⁴¹ So e.g. Warren, *Isagoge**, p. 11 (‘It is on this Aristotelian treatise [i.e. *Top*] that Porphyry builds his *Isagoge*’); Oehler, ‘Neue Fragmente’, p. 227 (although Porphyry names no names, ‘nonetheless the text of the *Isagoge* lets us see clearly to what extent Porphyry was a compiler’).

⁴² On Porphyry’s knowledge of earlier philosophy see Smith, ‘Studies’, pp. 747–764. For his general learning, a glance at *quaest Hom* is informative.

⁴³ On the alleged Stoicisms in *Isag* see Additional Note (A).

⁴⁴ On the basis of the text see Busse, *Isagoge**, pp. v–L; Minio-Paluello, *Isagoge**, pp. xxvii–xxxvi.

Secondly, there are the ancient translations. The *Introduction* was done into Latin by Marius Victorinus in the fourth century and by Boethius in the first decade of the sixth. Victorinus' version, known only from excerpts cited by Boethius, was perhaps not complete and was certainly paraphrastic.⁴⁵ Boethius' version, complete and close to the Greek text, had an immense vogue—it survives in almost 300 manuscripts. In addition, there are two Syriac translations, dating from the sixth and the seventh centuries; a sixth- or seventh-century Armenian translation; and a tenth-century Arabic translation.⁴⁶

Thirdly, there are the ancient commentaries. The earliest to survive are the Greek commentary of Ammonius and the two Latin commentaries of Boethius.⁴⁷ But they were not the earliest to have been written:

⁴⁵ See Minio-Paluello, *Isagoge**, p. xiv n. 1; pp. xxxvi–xxxix; Hadot, *Victorinus*, pp. 179–187. Hadot thinks, *contra* Minio-Paluello, that the translation was complete (p. 183 n. 15), so that his collection of fragments (pp. 367–380) is more generous than Minio-Paluello's (pp. 63–68).—At *def* 8.34–9.5, Victorinus says that ‘certain people, more careful and more complete in their exposition . . . , say that a definition must consist of five parts, i.e. of genus, species, difference, accident, property’. He is thinking of Porphyry, despite the absurdity of his remark. He adds, falsely, that Aristotle in the *Topics* had said what each of the five items is (9.9–11). And he notes that ‘we have already discussed these five items in full in a single book’ (9.14–15)—surely a reference to his version of *Isag* and a proof that he did not regard it as a mere translation. On *def* see Hadot, *Victorinus*, pp. 163–168; Pronay, *Victorinus*. Hadot, *Victorinus*, pp. 177–178, urges that *def* comes from Porphyry. Perhaps, it does; but Victorinus is such a garbler that we cannot use it as a quarry for Porphyrean material.

⁴⁶ On all the translations see Minio-Paluello, *Isagoge**, pp. xxix–xxxii; for the Syriac versions see also Baumstark, *Aristoteles bei den Syrern*, pp. 133–139; Brock, ‘Syriac translations’; Hugonnard-Roche, ‘Traductions’; for the Armenian, Sgarbi, ‘Osservazioni’; for the Arabic, Gyekye, *Arabic Logic*, pp. 133–139.

⁴⁷ Ammonius (on whom see Saffrey, ‘Ammonios’; Westerink, ‘Alexandrian commentators’, pp. 325–328) was born in about 440, and was still lecturing in 517: in *Isag*, which comes from his pupils’ lecture-notes, could be dated anywhere between 470 and 520. The MSS of Ammonius’ commentary contain numerous repetitions and doublets: Busse’s edition is a composite text.—Boethius was born in about 480. His commentary on the *Categories* was written during his consulship in 510 (in *Cat* 201B). In it he refers to his commentaries on the *Introduction* (159A); and at in *Isag*² 325.6–7 he promises a commentary on the *Categories*. The second commentary on *Isag* says that the translation of Porphyry was done after the first commentary. Hence the chronological order is fixed: in *Isag*¹, translation, in *Isag*², in *Cat* = 510. (See—with further and more speculative precision—Obertello, *Boezio* I, pp. 302–307. Asztalos, ‘Boethius’, pp. 368–371, urges that in *Isag*² was written after, not before, in *Cat*: she takes the reference at in *Isag*² 325.6–7, to allude to a second commentary on *Cat*, a work now lost if ever written: see below, p. 278.) Boethius’ commentaries have much in common with Ammonius but they were not based on him: so e.g. Chadwick, *Boethius*, pp. 153–154. *Contra*, Courcelle, *Lettres grecques*, pp. 269–272; but his conjecture ‘Ammonius’ for the corrupt ‘audivimus’ at Boethius, in *Int*² 361.9 (pp. 277–278) is wrong (for a defence of Meiser’s ‘Eudemus’ see Shiel, ‘Eudemus’), and even were it correct it would establish nothing for in *Isag*. Courcelle admits, p. 269, that ‘a common source’ is always a possibility. It is a plausible hypothesis

Ammonius refers to predecessors.⁴⁸ From the sixth century there are fragments of a Syriac commentary, written by Probus, doctor and archdeacon of Antioch.⁴⁹ Ammonius' Christian pupil, Philoponus, wrote a commentary, of which various pieces and paraphrases survive in Syriac translation.⁵⁰ There are Greek commentaries by Elias and by David; a third commentary is falsely ascribed to Elias (I refer to its author as '[Elias]'); and there is another anonymous commentary.⁵¹ There is a collection of scholia in Syriac, dating from about 700—the notes are based on Greek sources and here and there preserve a gem otherwise lost to the world.⁵² In about 900 the scholarly bishop Arethas wrote marginal notes in his text—which is the oldest surviving manuscript of the

that Boethius worked from 'a "scholar's copy" <of the Greek text of *Isag*>, set out with both marginal scholia and interlinear glosses' (see Shiel, 'Greek copy'—I cite from p. 339—and his earlier remarks in 'Commentaries', pp. 234–237). Whether, as Shiel argues, this was all that Boethius had to go on is another question: against Shiel see Ebbesen, 'Boethius as a scholar', p. 376 n. 15; Asztalos, 'Boethius', pp. 398–405; de Libera, *Art*, pp. 164–168. On Boethius and Porphyry see Bidez, 'Boëce'; P. Hadot, 'Boëce'; Chadwick, *Boethius*, pp. 120–133; Ebbesen, 'Boethius as a scholar'; Asztalos, 'Boethius'; Minio-Paluello, 'Boëce'.

⁴⁸ Ammonius occasionally refers to the views of 'certain people [$\tau\iota\nu\acute{\epsilon}\varsigma$]'; and the content makes it likely that these people are earlier commentators: see *in Isag* 23.2; 26.18; 37.21; 71.26. And note the reference to 'the interpreters [$\omega\acute{i}\acute{e}\xi\gamma\gamma\tau\alpha\acute{i}$]' at 72.13.

⁴⁹ See Baumstark, *Aristoteles bei den Syrern*, pp. 139–156. The surviving text is the latter part of a later paraphrase of Probus' commentary.—Baumstark claims that Probus' is 'probably the oldest commentary on the *Introduction*' (p. 148); and he asserts that the work was 'a first attempt to bring into the intellectual compass of the Syrian schools a text which thitherto had neither been commented on in Greek nor translated into Syriac' (p. 147). There was never any reason to believe that Probus antedates Ammonius' anonymous predecessors (whose existence Baumstark ignores); and Probus is now dated to the sixth century: Brock, 'Syriac Commentary', p. 7; Hugonnard-Roche, 'Traductions', pp. 301–305.—Baumstark also ascribes a vast influence and a revolutionary effect to Ammonius, before whose time the study of logic began with *Cat* and not with *Isag* (pp. 156–157); but he ignores Jerome, *ep* 50 1, and Boethius, *in Isag*¹ 12.20–21 (above, p. ix).

⁵⁰ See Baumstark, *Aristoteles bei den Syrern*, pp. 156–223. For the Syriac commentators I have relied on Baumstark's German translations; but note the warning in Minio-Paluello, *Isagogē**, p. xxix n. 2. On Philoponus see the papers in Sorabji, *Philoponus*. On [Philoponus], *in Isag* (published in Brandis' scholia to Aristotle) see Busse, *Isagogē**, pp. xxxviii–xxxix; id, *Ausleger*, p. 5.

⁵¹ Elias (a pupil of Olympiodorus) dates from the late sixth century (see Westerink, 'Alexandrian commentators', pp. 336–339; Goulet, 'Elias'); so too the mysterious David (on whom see Busse, *Ausleger*, pp. 13–19; Ouzounian, 'David'); so too [Elias] (on whom see Busse, *Ausleger*, pp. 8–10; Westerink, *Pseudo-Elias**, p. xvi; id, 'Alexandrian commentators', pp. 339–340). The anonymous commentary is probably later. We hear of commentaries by Proclus (Asclepius, *in Met* 142.36–37), Eutocius (Arethas, *in Isag* 20.29–35), and Olympiodorus (see Busse, *Isagogē**, pp. xlII–xlIV).—The dates and the mutual affiliations of these late commentaries are delicate matters: see e.g. Blumenthal, 'Pseudo-Elias'.

⁵² Texts in Baumstark, *Aristoteles bei den Syrern*, pp. 223–257.

Introduction. The notes are not his own: many are taken from David and others; but some come from otherwise unknown sources. There are too many mediaeval commentaries, both Greek and Latin, to list. But I shall mention the *Xenedemus*, a curious dialogue written in the fourteenth century by Theodorus Prodromus which presents a sequence of sophistical objections to Porphyry's explanations of his five items.⁵³

Adolf Busse, whose edition of the *Introduction*, published in 1887, is still the only semi-critical text, looked at twenty-five of the Greek manuscripts, and relied on six of them together with the translation of Boethius.⁵⁴ According to Lorenzo Minio-Paluello, 'the most useful' of the Greek manuscripts for the constitution of Porphyry's text are three in number—two of those used by Busse and a third which Busse described but did not use;⁵⁵ the ancient translations are sometimes the best witnesses;⁵⁶ and the early commentaries are of critical importance, although they must be used with exquisite tact.

The evidence is usually good enough to establish the state of the text in about 500. But by then it showed numerous variant readings; it had accumulated several glosses; and it had perhaps been tampered with in a more audacious fashion.

The *Introduction* is not a literary work: it is a handbook, and handbooks were open to change. A reader would make jottings in his copy, and the jottings might insinuate themselves into the tradition. (There are plenty of uncontroversial examples of the phenomenon—which had

⁵³ For the ancient commentators on *Isag* see in general Busse, *Isagoge**, pp. xxxiv–L (with the addenda at CIAG IV 2, p. 106); id, *Ausleger*; Plezia, *de commentariis*; Kustas, 'Commentators'; Moraux, 'Kurzkommentar'*, pp. 55–63; de Libera, *Isagoge**, p. xxxiv nn. 49–50.—For the mediaeval Latin tradition see Marenbon, 'Latin Commentaries', pp. 101–109—listing twenty-eight commentaries on the *Introduction* written before about 1150.

⁵⁴ Busse divided the MSS into two families, a good and a bad. From the good family he took his ABLM (9th to 11th century, A being Arethas' copy), from the bad Ca (C from the 11th century, and a lost exemplar from which the Aldine text of 1495 was printed). For Boethius' translation he had only an uncritical edition.

⁵⁵ *Isagoge**, pp. xxvii–xxviii: Minio-Paluello recommends BMQ (for Q, written in November 995, see Busse, *Isagoge**, pp. xxviii–xxix). He observes that Busse often falsely reports the readings of MQ, for which he relied on collations by Bruns and Villa.

⁵⁶ On the Greek text used by Boethius see Shiel, 'Greek copy', who shows how difficult it is to talk of 'Boethius' reading': 'Boethius began the <second> commentary by translating the *Isagoge* entire on its own . . . , but we can see that when he came to write the lemmata . . . he was at times translating different Greek from what he had used in the translation' (p. 340). An example: at 7.12 Boethius' translation has 'semper enim', his second commentary 'semper igitur'. The Greek MSS used by Busse have 'οὐδὲ'—save the Aldine text which has 'γάρ'. See below, p. 145.

already vexed Galen: *in Hipp Epid* XVIIA 364.) The second part of the *Introduction* would readily lend itself to such tampering; and the repetitions and general unevenness of the first part might arouse suspicion. But there is no particular passage where suspicion of tampering mounts to probability, and I shall speak, with no great conviction, as though our text were pretty much the text which Porphyry once wrote.

As for the variants and glosses which were around in 500, they are from one point of view of little consequence. For in the vast majority of cases they do not affect the general sense: even if we should often suspend judgement about the precise wording of Porphyry's Greek, we can almost always be confident—the hypothesis of tampering apart—that we know what Porphyry said.

Almost always—there are a few places in which the sense is dark or desperate. I have largely followed Busse's text, the occasional exceptions being listed in the Textual Notes. My knowledge of the textual tradition is entirely based on the evidence provided by Busse, Sgarbi, and Minio-Paluello.

Why write a commentary on the work? The *Introduction* is an essay of immense historical importance; and even if it has lost its position as the student's introduction to philosophy, any philosopher concerned with the history of the subject will read it with a keen interest. But that in itself hardly warrants a commentary.

The standard reason, ancient as well as modern, for writing commentaries is that the text is obscure.⁵⁷ But a primer ought not to be obscure; and it has been said that the *Introduction* 'avoids obscurity . . . For introductions ought not to contain difficult expressions' (David, *in Isag* 108.2–4).⁵⁸ Moreover, Porphyry had a reputation for clarity:

Plotinus, because of the celestial nature of his soul and because of the oblique and enigmatic style of his discourse, seemed heavy and difficult to understand. But Porphyry, like a rope of Hermes which reaches down to mankind, expressed everything, thanks to his wide-ranging learning, in a manner at once easy to grasp and pure. (Eunapius, *VS* IV i 10–11 [456–457])

Nonetheless, the *Introduction* collected a trail of commentaries.

⁵⁷ See e.g. Barnes, 'Metacommentary'; Mansfeld, *Prolegomena*, pp. 23–26, 149–161.

⁵⁸ For clarity as a feature of *Introductions* see Asper, 'Struktur', pp. 311–313. At the beginning of his vast commentary on Epictetus' elementary *Handbook* Simplicius notes that 'his remarks are clear. But perhaps it is not a bad idea to explain them as far as possible.' (*in Ench* 2.24–25).

The *Introduction* became a school-book. That is to say, a master read it with his students, his lectures embroidering the written page. And just as lectures on the *Prior Analytics* would be turned into commentaries on the *Prior Analytics*, so it was for Porphyry's *Introduction*. But that is an explanation, not a justification.

By way of justification, then: first, although Porphyry may often be as clear as glass, he is sometimes tolerably obscure—there are passages of the *Introduction* which are ill written, and demand exegesis, and there are passages which are crabbed, and require expansion.⁵⁹ Secondly, what is clear to one reader may be obscure to another, and what was transparent at one epoch may be opaque at another. Thirdly, Porphyry's primer may be elementary, but it is not uniformly easy; and many of the topics which it tackles or to which it alludes are both perplexing and intriguing.

A good commentator must admire, or at least love, his text. I do not claim that the *Introduction* is a neglected masterpiece, and I do not urge that it be reinstated in its old position in the philosophical curriculum. But I hope that anyone who reads this commentary will be half persuaded that Porphyry repays the ride.

⁵⁹ Other scholars find differently. 'The text, once relieved of the subtleties with which the commentators down the ages have burdened it, raises few difficulties. . . . Porphyry's account has an elementary character which, for most of the time, dispenses an editor from the obligation to add further elucidations' (Tricot, *Isagoge**, p. 8). Tricot's view was earlier expressed by Averroes, who commented on *Isag* with reluctance inasmuch as the text, in his view, needed no exegesis. Evangelou, from whom I take this information, claims that 'Averroes is correct in saying that the text of *Isagoge* as such is easy to comprehend and self-explanatory' ('Averroes', p. 325); and elsewhere he states that Porphyry's 'thinking is clear and his Greek is unusually elegant for a writer of the third century A.D.' ('Aristotle's doctrine', p. 15—referring to the passage from Eunapius).

NOTE TO THE READER

My translation purports to be written in English. It also purports to be faithful to the Greek—that is to say, to convey in English all and only what Porphyry conveyed in Greek. These two commonplace ambitions are, as every translator knows, mutual enemies; and where the conflict seemed irreconcilable I have preferred fidelity to style. (But some at least of the inelegancies in the translation are faithful to the inelegancies of the original.)

The *Introduction* is written in plain Greek; but it uses a number of technical and semi-technical terms. Many of these have entrenched English versions which I have usually adopted. All of them, and a few other words besides, are listed in the Glossaries.

The commentary is written for readers whose primary interest in the *Introduction* is philosophical—who desire to understand and to assess the various philosophical theses and arguments which Porphyry sets down. But philosophical notes on an ancient text require historical and philosophical support; and the fact that there is no modern English commentary of any sort on the *Introduction* has encouraged me to address a number of textual and historical issues. (Much of this material is tucked away in footnotes, and some of it is relegated to the Additional Notes.) In addition, there is rather more about terminology than is customary in a Clarendon edition—in part because the matter has been widely misjudged. On the other hand, there is nothing about the way in which the *Introduction* influenced and was understood by the mediaeval philosophers.

In principle, the commentary presupposes no knowledge of Greek philosophy and no knowledge of Greek. Greek (and Latin) expressions are sometimes quoted; but they are always—save in the more philosophical footnotes—translated into English.

The commentaries of Boethius are usually helpful; Ammonius is often to the point; and the later Greek commentators offer pertinent remarks which are not found in any extant earlier text. I have made constant use of these works; but I do not cite them systematically.

I often quote Alexander, Galen, Sextus Empiricus—authors who flourished half a century or more before Porphyry, and whose works

show something of the philosophical climate in which he lived. Plotinus is invoked sparingly. Certain later authors—Dexippus, Marius Victorinus, Boethius, Simplicius—are used more lavishly, for they frequently transmit Porphyrean notions in one form or another.¹ Finally, I cite Aristotle: such citations nod towards the texts on which Porphyry was nourished, and they also serve to indicate the origin of some of the problems which the *Introduction* implicitly addresses or silently ignores. These references are far from exhaustive; and the commentary is concerned to explain not Aristotle but Porphyry's understanding of Aristotle.

There is not much recent literature on the *Introduction*. Scholars with little taste for late Platonism rarely drink at Porphyry's bar; and Porphyrean scholars find the *Introduction* small beer. The work which I have found most illuminating is Alain de Libera's French edition of the *Introduction*. If I generally cite him only to dispute what he says, that is the graceless way of the learned world.

¹ General accounts of these people in e.g.: Sharples, 'Alexander'; Goulet and Aouad, 'Alexandros'; Boudon, 'Galien'; Annas and Barnes, *Sextus Empiricus*, pp. xi–xxxi; O'Meara, *Plotinus*; Dillon, *Dexippus*, pp. 7–14; Leroux, 'Dexippe'; P. Hadot, *Victorinus*; Chadwick, *Boethius*; Gersh, 'Boethius'; I. Hadot, *Simplicius*.

TRANSLATION

INTRODUCTION

§0: Preface

It being necessary, Chrysaorius, even for a schooling in Aristotle's predictions, to know what is a genus and what a difference and what a species and what a property and what an accident—and also for the presentation of definitions, and generally for matters concerning division and proof, the study of which is useful,—I shall attempt, in making you a concise exposition, to rehearse, briefly and as in the manner of an introduction, what the older masters say, avoiding deeper inquiries and aiming suitably at the more simple. For example, about genera and species—whether they subsist, whether they actually depend on bare thoughts alone, whether if they actually subsist they are bodies or incorporeal and whether they are separable or are in perceptible items and subsist about them—these matters I shall decline to discuss, such a subject being very deep and demanding another and a larger investigation. Here I shall attempt to show you how the old masters—and especially the Peripatetics among them—treated, from a logical point of view, genera and species and the items before us.

§1: Genera

Neither genera nor species, it seems, are so called simply. Thus we call a genus an assembly of certain people who are somehow related to some one item and to one another. The genus of the Heraclids is so called in this meaning, from their relation to some one item—I mean, to Hercules—, the plurality of people somehow related to one another taking their name, in contradistinction to the other genera, from the affinity derived from him. Again, in another sense we call a genus the origin of anyone's birth, whether from his progenitor or from the place in which he was born. In this sense we say that Orestes has his genus from Tantalus, and Hyllus from Hercules; and again that Pindar is Theban by genus, Plato Athenian—for anyone's fatherland is a sort of origin of his birth, just as his father is too. This meaning seems to be the one near to hand; for we call Heraclids those who descend from the genus

of Hercules, Cecropids those from Cecrops, and their kinsfolk. First, the origin of anyone's birth was named a genus; and after that, the plurality of people coming from a single origin (for example, from Hercules),
 10 demarcating which and separating it from the others we say that the whole assemblage of Heraclids is a genus. Again, in another sense we call a genus that under which a species is ordered, no doubt in virtue of a similarity with the former cases; for such a genus is a sort of origin for the items under it, and a plurality is held to contain everything under it.

Thus genera are so called in three ways; and it is the third which is of account to philosophers. Delineating it, they present it by saying that a genus is what is predicated, in answer to 'What is it?', of several items which differ in species; for example, animal.

For of predicates, some are said of only one item—namely, individuals (for example, Socrates and 'this' and 'that'), and some of several items—namely, genera and species and differences and properties and
 20 accidents (those which hold commonly not properly of something). Animal, for example, is a genus; man a species; rational a difference; laughing a property; and white, black, sitting are accidents.

Genera differ from what is predicated of only one item in that they are predicated of several items. Again, they differ from what is predicated of several items—from species because species, even if they are predicated of several items, are predicated of items which differ not in species but in number. Thus man, being a species, is predicated of Socrates and of Plato, who differ from one another not in species but in number, whereas animal, being a genus, is predicated of man and of cow
 25 3 and of horse, which differ from one another not only in number but also in species. Again, a genus differs from a property because a property is predicated of only one species—the species of which it is a property—and of the individuals under the species (as laughing is predicated only of man, and of particular men), whereas a genus is predicated not of one species but of several which differ. Again, a genus differs from a difference and from common accidents because differences and common accidents, even if they are predicated of several items which differ in species, are not predicated of them in answer to 'What is it?*' but rather to 'What sort of so-and-so is it?'. Asked what sort of so-and-so a man

* Here the received text has the following words, which I delete (see below, pp. 86–87):

For when we ask that of which these items are predicated, they are not predicated, we say, in answer to 'What is it? . . . (3.8–10)

is, we say that he is rational; and asked what sort of so-and-so a raven is, we say that it is black—rational is a difference, black an accident. But when we are asked what a man is, we answer an animal—and animal is a genus of man.

Hence the fact that they are said of several items discriminates genera from what is predicated of only a single individual; the fact that they are said of items which differ in species discriminates them from what is predicated as a species or as a property; and the fact that they are predicated in answer to 'What is it?' separates them from differences and from common accidents, which are predicated of each item of which they are predicated in answer not to 'What is it?' but rather to 'What sort of so-and-so is it?' or to 'What is it like?'. The stated delineation of genera, then, contains nothing excessive and nothing deficient.

15
20

§2: Species

We call a species, first, the shape of anything—it has been said:

first may his species be worthy of a kingdom

4

We also call a species what is under a genus of the sort presented—as we are accustomed to call man a species of animal, animal being a genus, and white a species of colour, and triangle a species of figure.

If in presenting genera we mentioned species (we said that a genus is what is predicated, in answer to 'What is it?', of several items which differ in species) and if we now say that a species is what is under a genus, then it must be realized that since a genus is a genus of something and a species a species of something, it is necessary to make use of both in the accounts of both.

5

Now they present species thus: a species is what is ordered under a genus; and: that of which a genus is predicated in answer to 'What is it?'. And also thus: a species is what is predicated, in answer to 'What is it?', of several items which differ in number—but this will be a presentation of what is most special and of what is only a species, whereas the others will also apply to what are not most special.

10

What I mean will be clear as follows. In each type of predication there are some most general items and again other most special items; and there are other items between the most general and the most special. Most general is that above which there will be no other superordinate genus; most special, that after which there will be no other subordinate

15

species; and between the most general and the most special are other items which are at the same time both genera and species (but taken in relation now to one thing and now to another).

What I mean should become clear in the case of a single type of predication. Substance is itself a genus. Under it is body, and under body animate body, under which is animal; under animal is rational animal, under which is man; and under man are Socrates and Plato and particular men. Of these items, substance is the most general and is only a genus, while man is the most special and is only a species. Body is a species of substance and a genus of animate body. Animate body is a species of body and a genus of animal. Again, animal is a species of animate body and a genus of rational animal. Rational animal is a species of animal and a genus of man. Man is a species of rational animal, but not a genus of particular men—only a species.

Every item which is proximate before the individuals will be only a species and not also a genus. Thus just as substance, being highest in that there is no genus before it, was the most general item, so man, being a species after which there is no other species nor indeed anything which can be split but only individuals (for Socrates and Plato are individuals), will be only a species and the last species and, as we said, the most special item. The intermediate items will be species of the items before them and genera of the items after them. Hence these stand in two relations, one to the items before them (in virtue of which they are said to be their species), and one to the items after them (in virtue of which they are said to be their genera). The extremes have a single relation.

For a most general item has the relation to the items under it, being genus of them all, whereas it does not have the relation to the items before it, being highest and a first origin and, as we said, that above which there is no other superordinate genus. And the most special item has a single relation, the one to the items before it, of which it is a species, whereas it does not have the relation to the items after it. True, it is also called a species of the individuals—but it is a species of the individuals in so far as it contains them, a species of the items before it in so far as it is contained by them.

So they demarcate what is most general thus: that which, being a genus, is not a species; and again: that above which there will be no other superordinate genus. What is most special: that which, being a species, is not a genus; and: that which, being a species, we shall not again divide into species; and: that which is predicated, in answer to 'What is it?', of several items which differ in number. The intermediates between the

extremes they call subaltern genera and species, and they posit that each of them is a species and a genus (but taken in relation now to one thing and now to another). The items before the most special, ascending as far as the most general, are said to be genera and species and subaltern genera.

*** as Agamemnon is an Atreid and a Pelopid and a Tantalid and, finally, of Zeus. But in the case of genealogies, for the most part they trace back the origin to a single person—say to Zeus—whereas in the case of genera and species this is not so. For the existent is not a single genus common to everything, nor are all things cogeneric in virtue of some single highest genus—as Aristotle says. Let it be supposed, as in the *Predications*, that the first genera are ten—ten first origins, as it were. Thus even if you call everything existent, you will do so, he says, homonymously and not synonymously. For if the existent were a single genus common to everything, all things would be said to be existent synonymously. But since the first items are ten, they have only the name in common and not also the account which corresponds to the name.

The most general items, then, are ten; the most special are of a certain number, but not an infinite one; the individuals—that is to say, the items after the most special items—are infinite. That is why Plato advised those who descend from the most general items to the most special to stop there, and to descend through the intermediates, dividing them by the specific differences; and he tells us to leave the infinites alone, for there will be no knowledge of them. So, when we are descending to the most special items, it is necessary to divide and to proceed through a plurality, and when we are ascending to the most general items, it is necessary to bring the plurality together. For species—and still more, genera—gather the many items into a single nature; whereas the particulars or singulars, in contrary fashion, always divide the one into a plurality. For by sharing in the species the many men are one man, and by the particulars the one and common man is several—for the singular is always divisive whereas the common is collective and unificatory.

Genera and species—what each of them is—having been presented, and the genus being one whereas the species are several (for the splitting of a genus always yields several species), the genus is always predicated of the species (and all the upper items of the lower items), but a species is predicated neither of its proximate genus nor of the upper items—for it does not convert. For it must be the case that either equals are predicated of equals (as neighing of horse) or the larger of the

6

5

10

15

20

7

5

smaller (as animal of man); but not the smaller of the larger—you will not say that animal is a man as you will say that man is an animal.

Of whatever a species is predicated, of those items, by necessity, will the genus of the species also be predicated—and the genus of the genus

10 as far as the most general item. For if it is true to say that Socrates is a man, man is an animal, and animal is a substance, then it is also true to say that Socrates is an animal and a substance. For, the upper items being always predicated of the lower, a species will be predicated of the individual, a genus both of the species and of the individual, and a most general item both of the genus (or of the genera, should there be several intermediate and subaltern items) and of the species and of the individual. For a most general item is said of everything under it—genera and species and individuals; a genus which comes before a most special item is said of all the most special items and of the individuals; an item which is only a species is said of all the individuals; and an individual is said of one only of the particulars.

15 20 Socrates is said to be an individual, and so are *this* white thing, and *this* person approaching, and the son of Sophroniscus (should Socrates be his only son). Such items are called individuals because each is constituted of proper features the assemblage of which will never be found the same in anything else—the proper features of Socrates will never be found in any other of the particulars. On the other hand, the proper features of man (I mean, of the common man) will be found the same in several items—or rather, in all particular men in so far as they are men.

25 8 Thus an individual is contained by the species and a species by the genus. For a genus is a sort of whole, an individual a part, and a species both a whole and a part—but a part of one thing and a whole (not of another item but) in other items (for a whole is in the parts).

We have discussed genera and species, and what a most general item is 5 and what a most special, and what items are at the same time both genera and species, and what individuals are, and in how many ways genera and species are so called.

§3: Differences

Let differences be so called commonly, properly, and most properly.

10 For one item is said to differ commonly from a diverse item when it is distinguished in any fashion by a diversity either in relation to itself or

in relation to another item—Socrates differs from Plato by diversity, and indeed from himself as a boy and as a grown man, and as being active in some way or having stopped, and always in respect of diversities in what he is like. One item is said to differ properly from a diverse item when it differs from it by an inseparable accident—inseparable accidents are, for example, blue-eyedness or hook-nosedness or even a hardened scar from a wound. One item is said to differ most properly from a diverse item when it is distinguished by a specific difference—as man differs from horse by a specific difference, that of rational.

15

In general, every difference, when it is added to something, makes that item diversified; but while common and proper differences make it otherlike, most proper differences make it other. For of differences some make things otherlike and some make them other. Now those which make them other have been called specific, those which make them otherlike simply differences. For when the difference of rational approaches animal, it makes it other and makes a species of animal; but the difference of being in motion makes it only otherlike compared to what is stationary: so one makes it other and one only otherlike. Now it is in virtue of those differences which make a thing other that divisions of genera into species are made, and that definitions—being made from a genus and differences of this sort—are presented, whereas in virtue of differences which make something only otherlike, only diversities are constituted and changes in what it is like.

20

9

5

Beginning again from the beginning, we should say that of differences some are separable and some inseparable—being in motion and being stationary, being healthy and being ill, and items similar to them, are separable; being hook-nosed or snub-nosed or rational or non-rational are inseparable. Of inseparable differences, some hold in their own right and some by accident—rational holds of man in its own right, and so do mortal and being receptive of knowledge; but being hook-nosed or snub-nosed hold by accident and not in their own right. When differences in their own right are present they are taken in the account of the substance and they make the item other; accidental differences neither are said in the account of the substance nor make the item other—but otherlike. Again, differences in their own right do not admit the more and the less, whereas accidental differences, even if they are inseparable, take augmentation and diminution; for neither a genus nor the differences of a genus in virtue of which it is divided are predicated more or less of that of which it is a genus. For these are the differences which complete the account of each item; and the being of any item, inasmuch as it is

10

15

20

one and the same, admits neither diminution nor augmentation, whereas being hook-nosed or snub-nosed or of some colour both augment and diminish.

25 Three species of differences being observed, and some being separable and some inseparable, and again of the inseparable some being in their own right and some accidental, again of differences in their own right some are those in virtue of which we divide genera into species and some those in virtue of which the items divided are specified. For example, given that all the following are differences in their own right of animal—animate and percipient, rational and non-rational, mortal and immortal—the difference of animate and percipient is constitutive of the substance of animal (for an animal is an animate percipient substance), whereas the differences of mortal and immortal and of rational and non-rational are divisive differences of animal (for it is through them that we divide the genera into species). But these very divisive differences of genera are found to be compleptive and constitutive of species. For animal is split by the difference of rational and non-rational, and again by the difference of mortal and immortal; and the differences of rational and of mortal are found to be constitutive of man, those of rational and of immortal of god, and those of non-rational and of mortal of the non-rational animals. In this way, the animate and inanimate difference and the percipient and non-percipient difference being divisive of substance, which is the highest item, the animate and percipient difference, collected together with substance, produces animal, while the animate and non-percipient difference produces plant. Since, then, the same differences taken in one way are found to be constitutive and in one way divisive, they have all been called specific; and it is they which 10 are especially useful both for divisions of genera and for definitions—not inseparable accidental differences and still less separable ones.

Defining them, they say: a difference is that by which a species exceeds its genus. For man surpasses animal by rational and mortal—animal is neither none of these items (for then whence would species get differences?) nor yet does it possess all the opposite differences (for then the same thing will possess opposites at the same time); rather, as they claim, potentially it possesses all the differences of the items under it and actually none of them. And in this way nothing comes to be out of what is not, nor will opposites be found at the same time about the same item.

They also define it thus: a difference is what is predicated, in answer to 'What sort of so-and-so is it?', of several items which differ in species.

For rational and mortal, when predicated of man, are said in answer to 'What sort of so-and-so is a man?' and not to 'What is a man?'. For when we are asked what man is, it is appropriate to say: animal; but when they pose the question 'Animal of what sort?', we shall appropriately present rational and mortal. For in the case of objects which are constituted of matter and form or which have a constitution at least analogous to matter and form, just as a statue is constituted of bronze as matter and its figure as form, so too the common and special man is constituted of the genus analogously to matter and of the difference as shape, and these—rational mortal animal—taken as a whole are the man, just as there they are the statue.

They also delineate these sorts of difference thus: a difference is what is of a nature such as to separate items under the same genus—rational and non-rational separate man and horse, which are under the same genus, animal. They also present them thus: a difference is that by which each type of thing differs. For man and horse do not differ in virtue of their genus—both we and the non-rational items are mortal animals. But when rational is added it sets us apart from them. And both we and gods are rational. But when mortal is added it sets us apart from them.

Elaborating on the topic of differences, they say that not just anything which happens to separate items under the same genus is a difference but rather something which contributes to their being and which is a part of what it is to be the object. For being of a nature such as to sail is not a difference of man even if it is a property of man; for although we will say that some animals are of a nature such as to sail and some not, thereby separating them from the others, nonetheless being of a nature such as to sail is not compleutive of their substance nor a part of it—rather, it is only a readiness of the substance, inasmuch as it is not of the same sort as those differences which are properly said to be specific. Differences will be specific, then, if they make a diverse species and if they are included in what it is to be it.

That is enough on differences.

§4: Properties

They divide property into four: what is an accident of a certain species alone, even if not of it all (as doctoring or doing geometry of man); what is an accident of all the species, even if not of it alone (as being biped

10

15

20

12

5

10

15

of man); what holds of it alone and of all of it and at some time (as going grey in old age of man); and fourthly, where ‘alone and all and always’ coincide (as laughing of man). For even if man does not always laugh, he is said to be laughing not in that he always laughs but in that he is of such a nature as to laugh—and this holds of him always, being con-
 20 natural, like neighing of horses. And they say that these are properties in the strict sense, because they convert: if horse, neighing; and if neigh-
 ing, horse.

§5: Accidents

25 Accidents are items which come and go without the destruction of their subjects. They are divided into two: some are separable and some
 13 inseparable. Sleeping is a separable accident, whereas being black is an inseparable accident for ravens and Ethiopians—it is possible to think of a white raven and an Ethiopian losing his skin-colour without the destruction of the subjects. They define them thus: accidents are what can hold or not hold of the same thing; or: what is neither a genus nor
 5 a difference nor a species nor a property but is always subsistent in a subject.

§6: A common feature

All the items we proposed having been demarcated—I mean genus, species, difference, property, accident—, we should say what common and proper features are present to them.

10 Common to them all is being predicated of several items. But genera are predicated of species and of individuals, and so too are differences, whereas species are predicated of the individuals under them, properties of the species of which they are properties and of the individuals under the species, accidents both of species and of individuals. For animal is predicated of horses and of cows, which are species, and of
 15 this horse and of this cow, which are individuals, and non-rational is predicated of horses and of cows and of the particulars, whereas a species such as man is predicated only of the particulars, a property such as laughing both of man and of the particulars, black both of the species of ravens and of the particulars, being an inseparable accident, moving

of man and of horse, being a separable accident—but principally of the individuals and also, on a second account, of the items which contain the individuals.

20

§7: Genus and difference

Common to genera and differences is the fact that they can contain species; for differences too contain species, even if not all those which the genera contain—rational, even if it does not contain non-rational items as animal does, nevertheless contains man and god, which are species.

14

What is predicated of a genus as genus is also predicated of the species under it, and what is predicated of a difference as difference will also be predicated of the species made from it. For animal being a genus, substance and animate are predicated of it as genus—and these items are also predicated of all the species under animal, as far as the individuals; and rational being a difference, using reason is predicated of it as difference—and using reason will be predicated not only of rational but also of the species under rational.

5

Common too is the fact that if either a genus or a difference is removed, the items under it are removed. For just as, if there is no animal there is no horse and no man, so if there is no rational, nothing will be an animal using reason.

10

Proper to genera is the fact that they are predicated of more items than are differences and species and properties and accidents. For animal applies to man and horse and bird and snake, quadruped only to things which have four legs, man only to individuals, neighing only to horse and the particular horses, and accidents similarly to fewer items. (We must take the differences by which a genus is split, not those which are compleptive of the substance of the genus.)

15

Again, a genus contains the difference potentially; for of animals some are rational and some non-rational.

20

Again, genera are prior to the differences under them, which is why they co-remove them and are not co-removed. For if animal is removed, rational and non-rational are co-removed. But the differences do not co-remove the genus; for even if they are all removed, a percipient animate substance can be thought of—and that is what animal is.

15

Again, a genus is predicated in answer to ‘What is it?’, a difference to ‘What sort of so-and-so is it?’, as has been said.

Again, there is one genus for each species (for example, animal for man) but several differences (for example, rational, mortal, receptive of thought and knowledge, by which man differs from the other animals).

5 A genus is like matter, a difference like shape.

Other items both common and proper are present to genera and differences—but let these suffice.

§8: Genus and species

10 Genus and species have in common, as has been said, the fact that they are predicated of several items. (Let the species be taken as a species and not also as a genus, if the same item is both species and genus.)

Common to them also is the fact that they are prior to the items of which they are predicated, and the fact that each is a sort of whole.

15 They differ in that a genus contains the species whereas the species are contained by and do not contain the genus. For a genus is wider than a species.

Again, genera must be there beforehand, and, being shaped by the specific differences, produce the species. Hence genera are also prior by nature; and they co-remove and are not co-removed, and if the species exists the genus too certainly exists, whereas it is not the case that if the genus exists the species too certainly exists.

20 Genera are predicated synonymously of the species under them, but not the species of the genera.

Again, genera are more extensive by containing the species under them, and species are more extensive than genera by their own differences.

Again, a species will not be most general nor a genus most special.

16 §9: Genus and property

Genus and property have in common the fact that they follow their species: if man, animal; and if man, laughing.

5 A genus is predicated equally of its species and so too is a property of what participates in it—man and cow are equally animals, Anytus and Meletus are equally laughing.

Common too is the fact that a genus is synonymously predicated of its own species, and a property of that of which it is a property.

They differ in that a genus is prior and a property posterior—animal must exist and then be divided by differences and properties.

A genus is predicated of several species, a property of the one species of which it is a property.

A property is counterpredicated of that of which it is a property, a genus is not counterpredicated of anything—it is not the case that if animal, man, nor that if animal, laughing; but if man, laughing, and vice versa.

Again, a property holds of all the species of which it is a property, and of it alone and always: a genus holds of all the species of which it is genus, and always—but not of it alone.

Again, if properties are removed they do not co-remove the genera; but if genera are removed, they co-remove the species to which the properties belong, so that, that of which they are properties being removed, the properties themselves are also co-removed.

§10: Genus and accident

Common to genus and accident, as has been said, is the fact that they are predicated of several items—whether the accident is separable or inseparable. For moving is predicated of several items, and black of ravens and Ethiopians and certain inanimate items.

A genus differs from an accident in that a genus is prior to its species whereas accidents are posterior to the species—for even if an inseparable accident is taken, nevertheless that of which it is an accident is prior to the accident.

What participates in a genus participates equally, what participates in an accident does not—for participation in accidents admits augmentation and diminution, whereas participation in a genus does not.

Accidents subsist principally on individuals, whereas genera and species are prior by nature to individual substances.

Genera are predicated of the items under them in answer to 'What is it?', accidents in answer to 'What sort of so-and-so is it?' or to 'What is it like?'. For, asked what sort of item an Ethiopian is, you will say black; asked what Socrates is like, you will say that he is sitting down or walking about.

We have said how genera differ from the other four; and it is the case that each of the others also differs from the other four items, so that, there

being five and each one differing from the other four, the differences turn out to be four times five in all or twenty. Or rather, as they are successively enumerated, the second group is short by one difference inasmuch as it has already been taken, the third by two, the fourth by three, and the fifth by four: hence the differences turn out to be ten in all—four, three, two, one. Genera differ from differences, from species, from properties, and from accidents—so there are four differences. As for differences, how they differ from genera was said when it was said how genera differ from them. So it remains to say how they differ from species, from properties and from accidents—and there turn out to be three differences. Again, as for species, it was said how they differ from differences when it was said how differences differ from species, and it was said how species differ from genera when it was said how genera differ from species. So it remains to say how species differ from properties and from accidents. So these differences are two. It will remain to say how properties differ from accidents; for how they differ from species, from differences and from genera has already been said in the differences of these in relation to them. So we take four differences of genera in relation to the other items, three of differences, two of species, and one of properties (in relation to accidents): they will be ten in all, four of which—those of genera in relation to the other items—we have already explained.

10

§11: Difference and species

Common to difference and species is the fact that they are participated in equally: particular men participate equally in man and also in the difference of rational.

Also common to them is the fact that they are always present in what participates in them; for Socrates is always rational and Socrates is always a man.

15 Proper to differences is the fact that they are predicated in answer to 'What sort of so-and-so is it?', and of species that they are predicated in answer to 'What is it?'. For even if man is taken as a sort of thing, he will not be a sort of thing simply but rather in so far as the differences approach the genus and give subsistence to the species.

20 Again, differences are often observed in several species—for example, quadruped in very many animals which differ in species; but a species applies only to the individuals under it.

Again, differences are prior to their species. For if rational is removed it co-removes man, whereas if man is removed it does not remove rational, there being god.

Again, a difference is compounded with another difference: rational and mortal are compounded for the subsistence of man. But species are not compounded with species so as to generate some other species. A certain horse comes together with a certain ass for the birth of a mule; but horse, simply, will not be compounded with ass to produce mule.

19

§12: Difference and property

Differences and properties have in common the fact that they are participated in equally by what participates in them: rational items are equally rational, and laughing items are equally laughing.

5

Being present always and in every case is common to both. For even if a biped is mutilated, nevertheless 'always' is said in relation to its nature, since what is laughing too has 'always' in that it is of such a nature and not in that it always laughs.

Proper to differences is the fact that they are often said of several species—for example, rational applies both to man and to god—whereas a property applies to one species (the species of which it is a property).

10

Differences follow the items of which they are differences but do not convert, whereas properties are counterpredicated of the items of which they are properties inasmuch as they convert.

15

§13: Difference and accident

Common to differences and accidents is the fact that they are said of several items.

Common in relation to inseparable accidents is the fact that they are present always and to every case: biped is always present to all ravens, and so similarly is black.

20

They differ because differences contain and are not contained (rational contains man), whereas accidents in a way contain in so far as they are in several items, and in a way are contained in that their subjects are receptive not of one accident but of several.

20

5 Differences are unaugmentable and undiminishable, whereas accidents admit the more and the less.

Contrary differences do not mix whereas contrary accidents will mix.

Such are the common and such the proper features of differences and the others. How species differ from genera and from differences has already been said when we said how genera differ from the others and 10 how differences differ from the others.

§14: Species and property

Species and properties have in common the fact that they are counter-predicated of one another: if man, laughing; and if laughing, man. (That laughing should be taken as being of a nature such as to laugh has often been said.)

15 Species are present equally in what participates in them, and properties in that of which they are properties.

Species differ from properties in that a species can also be a genus of other items whereas a property cannot be a property of other items.

Species pre-subsist properties, and properties supervene on species. 20 For there must be a man in order for there to be something laughing.

Again, species are always actually present in their subjects, whereas properties are sometimes so potentially. For Socrates is always actually a man whereas he does not always laugh (even though he is always of a nature such as to be laughing).

21 Again, if the definitions are different, then the items defined are different too. The definition of species is being under a genus, and being predicated, in answer to 'What is it?', of several items which differ in number, and so on; that of property is being present to it alone and always and to every case.

§15: Species and accident

5 Common to species and accidents is the fact that they are predicated of many items. The other common features are few since accidents and that of which they are accidents are set furthest apart from one another.

Proper to each of the two is the fact that species are predicated in answer to 'What is it?' of that of which they are species, whereas accidents are predicated in answer to 'What sort of so-and-so it is?' or to 'What is it like?'.

Also the fact that each substance participates in one species and in several accidents, both separable and inseparable.

Species are thought of before accidents, even if they are inseparable (there must be a subject in order for something to be its accident), whereas accidents are of such a nature as to be later-born and they have an adventitious nature.

Participating in species occurs equally, in accidents—even inseparable ones—not equally. For one Ethiopian compared to another may have a skin-colour either diminished or augmented in blackness.

It remains to discuss properties and accidents; for it has been said how properties differ from species, from differences and from genera.

§16: Property and accident

20

Common to properties and inseparable accidents is the fact that without them the items on which they are observed do not subsist. For just as without laughing man does not subsist, so without black Ethiopian will not subsist.

Just as properties are present in every case and always, so too are inseparable accidents.

They differ in that properties are present in one species only (as laughing in man) whereas an inseparable accident, for example black, is present not to Ethiopian alone but also to raven and coal and ebony and certain other things.

Again, properties are counterpredicated of what they are properties of, whereas inseparable accidents are not counterpredicated.

Participating in properties occurs equally, in accidents it is now more and now less.

There are other common and proper features than those mentioned. But these are enough both to differentiate the items and to set out what they have in common.

COMMENTARY

§0: PREFACE

The *Introduction* is addressed to Chrysaorius.¹ Porphyry offered him at least two other essays. From one of them, ‘On what is up to us’, we have some ten pages. They begin thus:

In our conversation yesterday, Chrysaorius, when we discussed the choice of ways of life . . . (*nost potest* 268 = Stobaeus, *ec* II viii 39)

Later Chrysaorius is called ‘a lover and an admirer of Homer’ (*ibid* 271 = *ibid* 42); and the text shows that he had read through the *Republic* with Porphyry. Of the other essay, ‘On the disagreement between Plato and Aristotle’, we have nothing but the title.² It is Elias who tells us that it was written for Chrysaorius (*in Isag* 39.6–8).

Otherwise Chrysaorius is known only from the commentaries on the *Introduction*.³

Having addressed other books to him, Porphyry addressed this book to him as well, for the following reason. He was a teacher of Chrysaorius and explained mathematics to him. But he had to investigate the fires of Etna and so left Rome. During this time Chrysaorius discovered Aristotle’s *Categories*: he read the work but did not manage to understand it. He confessed as much to Porphyry, who was in Sicily, explaining his difficulty and asking him to return to Rome if he had completed his work on the fires, and if not, to write an introduction for him which would enable him to follow the book. Since Porphyry could not yet return, he wrote this book, having put together its contents from what Plato and Taurus had said, and using almost their own words. (Ammonius, *in Isag* 22.12–22)⁴

Parts of the story are found, with embellishments, in other commentaries: Philoponus notes that Chrysaorius belonged to the highest rank

¹ Asper, ‘Struktur’, p. 325, takes this to show that *Isag* was from the start a written text and not a lecture.

² See below, p. 338.

³ The name ‘Chrysaorius’ is rare. It is found on two Roman inscriptions of the 4th or 5th century: CIL VI 3, 32167, 32186. ‘χρυσάοπος [of the golden sword]’ is an epithet of Apollo (e.g. Homer, *Iliad* V 509). ‘Chrysaor’ is found as a name on Rhodes (e.g. SEG XXXIX 731) and in Caria (e.g. *ILabr* 65); cf *IG* XIV 2137 (Rome).—On our man see Goulet-Cazé, ‘Chrysaorius’.

⁴ The passage comes from the ‘second preface’, in all probability a later addition to the commentary (see Busse, *Isagoge**, p. vi n. 4; p. 21 (app crit to line 5); id, *Ausleger*, pp. 4–5).

of Roman senators (*in Isag* 178.9–11); Elias adds that he was a descendant of the great Symmachus (*in Isag* 39.8–19); David assures us that he had been consul (*in Isag* 92.17–18); and [Philoponus] remarks that he was ‘a member of the Roman church’, and that ‘he was occupied by military and political or public matters’ (*in Isag* 11a34–35, b8–15).

Much of the story was doubtless deduced from Porphyry’s text. If Porphyry addressed certain works to Chrysaorius, then he was his teacher; a pupil of the great Porphyry will have been a man of rank; if Porphyry wrote to Chrysaorius, then the two men were not in the same town, and so Porphyry wrote from Sicily, where he is known to have spent some years; and so on. Much ancient biographical writing is based on such inferences.

Some of the story is certainly false: the *Introduction* was not concocted from Plato’s dialogues, and it is improbable that the Platonist Taurus contributed anything to it.⁵ Other items are at best dubious: scholars have been reluctant to believe that Chrysaorius was a Christian;⁶ as for Porphyry’s interest in the fires of Mount Etna—remember that Plato allegedly visited Sicily in order to see those same fires;⁷ and even Elias’ reference to Symmachus may be a product of his imagination.⁸

An understanding of genera, differences, species, properties, and accidents is necessary for the study of logic. [1.3–6]

Porphyry’s opening period is constipated, and it is also ambiguous. First, the Greek contains two genitive absolute clauses: ‘it being necessary’ and

⁵ Nothing we know of Taurus—texts in Lakmann, *Taurus*, pp. 229–258—suggests that he had anything pertinent to contribute. Some think that the name ‘Taurus’ in the MSS of Ammonius is a scribal error (and Brandis thought the same of ‘Plato’—though his ‘Plotinus’ is scarcely an improvement).

⁶ But Plotinus’ circle included some Christians (*v Plot* xvi 1–3); Porphyry’s *Homeric questions* was addressed to Anatolius (praef [1.11]), whom several scholars identify with the Aristotelian bishop of Laodicea (see Goulet, ‘Anatolius’); and some give credit to the claim that Porphyry himself had been a Christian in his youth (e.g. Socrates, *h.e.* III 23, invoking Eusebius—but see Goulet, ‘Mélancholie’, pp. 455–457).

⁷ So Diogenes Laertius, III 18, and a dozen other texts (see Riginos, *Platonica*, p. 73). An Arabic text has Porphyry imitate Empedocles and jump into the crater: Baumstark, *Aristoteles bei den Syrern*, p. 160.

⁸ Did Elias translate the Greek ‘Chrysaorius’ into the Latin ‘Aurelius’ and hence discover a connection with Symmachus?—It is hard to underestimate the imaginative powers of ancient scholars. Busse declares that ‘the information in the passage <from Ammonius> is as absurd as it is impossible’ (*Ausleger*, p. 5 n. 8); cf Zekl, *Einleitung**, p. 291 n. 2.

‘the study of which is useful’. The two clauses are usually taken to be parallel: Porphyry then says that knowledge of genera etc (i) is necessary if you are to learn about the types of predication, and (ii) is useful if you want to construct definitions etc. (The ‘τε’ at 1.5 links the two genitive absolutes, and ‘τούτων’ at 1.6 refers to genera, etc.) Alternatively, the second genitive absolute may be subordinate to the first: Porphyry then says that knowledge of genera etc is necessary (i) for learning about the predication and (ii) for presenting definitions etc—which things are useful. (The ‘τε’ links the two occurrences of ‘εἰς’, and ‘τούτων’ refers to the presentation of definitions etc.)

The first interpretation implies that while knowledge of genera etc is necessary for learning about predication it is merely useful for definitions. That is rum.⁹ The second interpretation gives Porphyry a modest argument: ‘X is necessary for Y; and Y is useful—hence I write about X’.¹⁰ My translation takes the second line.¹¹

There is a second ambiguity: what is the force of the word ‘καὶ’ before ‘for a schooling in Aristotle’s predication’?¹² The word might be correlated with the ‘τε’ in the following line: ‘both for a schooling . . . and for the presentation of definitions . . .’¹³ Or it might be free-standing; and of the possibilities which that construal offers, ‘even for a schooling . . .’ makes pleasing sense:¹⁴ a study of Aristotle’s ten types of predication introduced students to philosophy; and Porphyry claims that even for this initial instruction they need to know about genera and the rest.

There is a third ambiguity. The phrase which I have translated by ‘Aristotle’s predication’ is often rendered ‘Aristotle’s *Predication*’, the word ‘κατηγορία’ being given a capital kappa and read as a book-title.

⁹ So e.g. David, *in Isag* 104.26–27. But David comments that you might take ‘useful’ in the sense of ‘necessary’—and the two words are apparently used interchangeably, in a very similar context, by Porphyry himself (*in Cat* 60.2 ≈ 8); cf e.g. Alexander, *in Met* 237.14.

¹⁰ Cf Hero, *metr* 3.6–7: X is useful for Y, and Y is necessary—so Hero will write about X.—Innumerable ancient works contain prefatory remarks about their own utility: Plato allegedly recommended the habit (Albinus, *prol* 147.7–10), and Aristotle developed it (see esp *Top* 101a25–b4); see Mansfield, *Prolegomena*, pp. 195–197; *id*, *Prolegomena mathematica*, pp. 173–174.

¹¹ So too Tricot; and, apparently, Boethius’ translation (but his commentary—*in Isag* 2 148.17–149.2—takes the first construal).

¹² The question is discussed by e.g. Ammonius, *in Isag* 26.9–17; 31.2–9 (the two passages are doublets, and inconsistent with one another).

¹³ For the combination ‘καὶ . . . τε . . .’ see Denniston, *Particles*, p. 500 (with Platonic examples).

¹⁴ It is mentioned as one of three possible interpretations by anon, *in Isag* IV 19.

Porphyry's turn of phrase tells against the book-title.¹⁵ Not that it makes much difference: a schooling in Aristotle's predications would no doubt take the form of a reading of Aristotle's *Predications*—or *Categories*, as we customarily call the essay.¹⁶

'Genus', 'difference', 'species', 'property', and 'accident' are the normal translations of the five Greek words by which Porphyry designates the five items he will discuss. In translation, conservatism has practical reasons in its favour; and in three of the five cases it is not easy to find a superior version.

'Difference' for 'διαφορά' needs no advocacy; and 'property' for 'ἰδιον' cannot be bettered. (Philosophical readers must forget the contemporary jargon which makes 'property' apply to any item picked out by a one-place predicate.) For 'συμβεβηκός' the word 'accident' is not altogether felicitous—in particular, the notion of contingency, which had to be forced upon the Greek term, is present in English from the start. 'Concomitant' is alluring, and something as colourless as 'characteristic' or 'feature' might find favour. But a heterodox translation would only replace familiar by unfamiliar disadvantages.

As for 'genus' and 'species', in ordinary Greek the terms 'γένος' and 'εἶδος' were used promiscuously, 'γένος' meaning something like 'kind' or 'sort' or 'type', and 'εἶδος' meaning something like 'type' or 'kind' or 'sort'.¹⁷ Plato generally uses the words interchangeably—see, for example, *Parm* 129c, where what were called εἶδη at 127a and d are now referred to as τὰ γένη τε καὶ εἶδη.¹⁸ And so too, often enough, in Aristotle. For example, at *Meteor* 378a19–24 there are two εἶδη of bodies in the earth, stones and metals; and there are many γένη of stones. And

¹⁵ For a similar use of 'παρὰ Αριστοτέλει' see Alexander, in *Top* 23.21.—Boethius translates 'ad eam quae est apud Aristotelem praedicamentorum doctrinam'. Not 'schooling in Aristotle's predications', but rather 'Aristotle's schooling in predications'. Boethius' Greek text perhaps omitted the 'τῶν' before 'παρὰ Αριστοτέλει'.—Spade's translation ('... to teach about Aristotle's *Categories*') is doubly wrong: 'εἰς . . . διδασκαλίαν' means 'for being taught about', not 'for teaching'.

¹⁶ 'Categories' is a transliteration of the orthodox Greek title. 'Category' is a false translation of the Greek word 'κατηγορία', which means 'predication'.

¹⁷ They occur in tandem ('species and genus') in many documentary papyri, where they are usually taken to mean something like 'goods and chattels'; but Schubert—to whom I am here indebted—argues that they mean 'cash and kind' (*Yale Papyrus*, pp. 67–69). Whence French 'espèce' and English 'specie' for cash payment.

¹⁸ Cf *Soph* 222d; but note the hint of a distinction at 253d.

note *Cat* 9a14, where ‘γένος’ replaces the ‘εἶδος’ of 8b26–27.¹⁹ Nor do later authors always distinguish the terms: see Alexander, in *Met* 112.19–113.1, where the term ‘ἀνομοειδεῖς’ is picked up by ‘εἴτερον γένος’ (which is then replaced by ‘ἄλλο εἶδος’); or Porphyry, *ad Aneb* ii 2ef, where he distinguishes types of divination and uses first ‘εἶδος’ and then ‘γένος’ for ‘type’.

Such facts urge anodyne translations—‘kind’ for ‘γένος’ (say) and ‘sort’ for ‘εἶδος’. For in modern English ‘genus’ and ‘species’ are technical terms in zoology and in botany;²⁰ and in ordinary language they have a more restricted use than ‘sort’ or ‘kind’. A translator of Aristotle has, I think, reason to insist on an anodyne unorthodoxy. But for Porphyry, the orthodox translations are less obnoxious, and tradition may carry the day.

Porphyry introduces his five items in the order genus, difference, species, property, accident. The same order is followed in the second part of the *Introduction*; and it was, or became, the standard order.²¹ On the other hand, the first part of the essay takes species after genera and before differences. The ancients found an explanation for this discrepancy: on the one hand, the correct order places differences before species, since differences are more general than species; on the other hand, genus and species are correlative terms, so that Porphyry must

¹⁹ The commentators disagreed about the passage: ‘Is it because these species are also genera of other species, being still more universal and subaltern, that he calls them both genera and species—not (as Alexander says) because he uses the words genus and species interchangeably, the difference between them not yet having been recognized?’ (Simplicius, in *Cat* 229.7–11—cf 243.21–27; 252.23–26). Alexander more than once warns readers that here or there Aristotle ‘uses γένος instead of εἶδος’ (e.g. in *Met* 153.13; 204.28; 410.38; 424.14–15).

²⁰ The major classificatory levels in contemporary zoology are: kingdom, phylum, class, order, family, genus, species. Man, or *homo sapiens*, is a species of the genus *homo*, of the family *hominidae*, of the suborder *Anthropoidea* of the order of primates, of the subclass *Eutheria* of the class of *mammalia*, of the subphylum *Vertebrata* of the phylum *Chordata*, of the kingdom *Animalia*. Nothing remotely like this rococo structure is found in any ancient text.—Balme, who rightly insists that the modern technical uses have nothing to do with Aristotle, says that ‘the neoplatonist commentators were seriously wrong to present <Aristotle’s> analysis [i.e. his talk of genera and species] as a classification of orders of generality, in which genus and species are two among many levels, as in the “tree of Porphyry”’ (‘Division and difference’, pp. 72–73). But Porphyry never presents genus and species as two among many levels; nor is the idea known to the ‘neoplatonist commentators’, who do not ascribe it to Aristotle.

²¹ So e.g. Martianus Capella, V 476–480—but note IV 344–348, for the order genus, species, difference, accident, property.

elucidate species immediately after he has elucidated genera.²² Such questions of order enormously interested philosophers of late antiquity, and are rarely of any significance.

Why is knowledge of genera etc necessary (or useful) for a study of logic?²³ As for definitions and divisions, the point is evident: 'It is thoroughly familiar that every definition consists of a genus and a difference' (Gellius, IV i 10),²⁴ and a division is the splitting of a genus into its species by way of differences. If you do not know what genera and species and differences are, then you cannot construct a division or make a definition. And 'the whole of logical theory depends on definitions and divisions' (scholiast to Dionysius Thrax, *GG* I iii 115.21–22).

As for proof, any proof starts from first principles, among which are definitions, and proceeds to show that a '*per se* accident' holds of a certain genus. Such, at least, is the standard Aristotelian theory. Hence you will not be able to construct a proof unless you are *au fait* with definitions (and hence with genera and differences) and can recognize a *per se* accident when you see one.

By 'Aristotle's predication' Porphyry means the ten types of predication which Aristotle distinguishes in his *Categories*. Aristotle elsewhere speaks of these items as 'the genera of predication' (*APst* 83b15; *SEI* 178a5); and the types of predication were taken to be, or to correspond to, certain genera.²⁵ Hence you will not know the first thing about predication unless you know what a genus is.²⁶

²² See e.g. Boethius, in *Isag*² 198.9–199.11 Elias, in *Isag* 53.24–26; [Elias], in *Isag* xxxii 1–5.

²³ In the words 'definitions, . . . division and proof' Hadot, *Victorinus*, p. 120 n. 30, and p. 182, discovers a formal tripartition of logic: the word 'ὅλως' 1.5 is enough to scotch the idea.

²⁴ For other equally banal texts see e.g. [Plato], *def* 414D; Trophonius, *proleg* 11.11–12; anon, *proleg rhet* 30.17–18; Troilius, *proleg* 54.20–25; scholiast to Hermogenes, *stat* 184.8; scholiast to Dionysius Thrax, *GG* I iii 116.32–36. For the Aristotelian base see e.g. *Top* 103b15–16; 141b25–27; 153b14–15; *Met* 1037b29–30; with e.g. Alexander, in *Top* 319.16–20; 321.8–9; in *Met* 416.4–5; Victorinus, *def* 7.18–8.34; Ammonius, in *Cat* 44.10; Boethius, in *Int*¹ 46.2; in *Int*² 53.1–2.—All definition is therefore of species; for a species is a combination of genus and difference (Aristotle, *Top* 143b8–10; *Met* 1057b7–13).

²⁵ See below, pp. 124–125.

²⁶ The ancient commentators who found a book-title in the word 'predications' noted that genera, species and differences are present at *Cat* 1b16–24, and that properties are mentioned at 4a10, 6a26 and 11a15 (so e.g. Boethius, in *Isag*² 152.8–17). They might have cited many more passages. *Γένος*: 2a14–17; b7–10, 19–23; 3a38–b4; b20–22; 6a18; 9a14; 10a11; 11a23, 25, 29, 38; [b15]; 14a15–25; 15a4. *Εἶδος*: 2a14–17; b7–10, 19–23; 3a38–b4; b20–22; 8b27; 14a15; 15a2–5, 13. *Διαφορά*: 3a22–26, 33; b1–9. *Τὸν*: 3a21; b27; 4b2, 17; 6a35; 13b33. *Συμβεβηκός*: [5b10]; 7a27, 32, 36.

Grant that knowledge of genera etc is in this way necessary for the budding logician: why introduce the five items as a prologue to the study of logic? Why not treat them as they arise in the course of study? The opening of the *Categories* suggests an answer. How these paragraphs, which explain what homonyms and synonyms and paronyms are, contribute to the general economy of Aristotle's work was a standing question for ancient exegetes. According to Porphyry,

he sets down in advance the things which are necessary for the exposition of the predication so that he will not, in the middle of his instruction, make digressions and destroy the continuity. (*in Cat* 60.2-4)²⁷

Perhaps Porphyry thought that Aristotle might have made a few more introductory remarks in the same vein—and so wrote the *Introduction*.

A couple of passages from Porphyry's commentary on the *Categories* may be adduced. First, on *Cat* 1b16-24, Porphyry remarks that Aristotle will speak of genera, difference in genus and difference in species, differences, etc, and that all these items need to be explained (*in Cat* 81.34-82.4)—the next several pages Porphyry fills with explanations (*ibid* 82.5-86.4).²⁸ Secondly, at *in Cat* 93.25-94.1, Porphyry declares that, before looking for the properties of substance, we must determine what it is to be a property of something—and this he determines over a couple of pages. In both these passages the commentary rehearses, in detail and without back-reference, issues which were discussed in the *Introduction*. Having written the commentary, did Porphyry come to think that some of the matters he discussed there might better be set out in a preliminary essay? (And was *Isag* therefore written after *in Cat*?)

Why these five items in particular? Why not add, say, 'predicate' or 'subject' or 'term' or . . . ?²⁹ It is not that the five items have each their individual importance: rather, they form a group, and they have a corporate history.

²⁷ Cf *ad Gedal* 73 = Simplicius, *in Cat* 379.12-20; Dexippus, *in Cat* 17.13-16; Simplicius, *in Cat* 19.9-16.

²⁸ See also Dexippus, *in Cat* 28.28-29.29; Simplicius, *in Cat* 54.24-25—who proceeds to give an account of genus, difference and species with explicit reference to *Isag* (54.26-56.15).

²⁹ See de Libera, *Querelle*, p. 16.

In the *Topics* Aristotle offers an account of the ‘four predicables’:³⁰

Every proposition and every problem shows either a property or a genus or an accident. (For differences, being general, are to be ranged under genera.) But since some properties signify what it is to be something and others do not, let us divide properties into these two parts, let us call definitions those which signify what it is to be something, and let us designate the others properties, using the name presented for them in common. It is clear, then, from what we have said that, according to the present division, there are four items in all: definition, property, genus, accident. (*Top* 101b16–25)

Aristotle then explains what each of the four items is (101b37–102b26); and a little later he offers a proof that every proposition and problem shows exactly one of the items (103b2–19).³¹

The phrase ‘according to the present division’ (101b24) suggests that Aristotle’s list is provisional, or that it has a local significance; and at 103a1–5 Aristotle says that his divisions are given ‘in outline’ or roughly (cf. 101a19–24). Moreover, in the body of the *Topics* Aristotle generally uses a different and incompatible tetrad of items.³² Again, certain texts in the *Topics* suggest that a more refined account of the predicables will separate differences from genera (e.g. 128a20–29) and might usefully introduce species (e.g. 103a6–23). In short, the fourfold division was neither announced nor treated as settled doctrine.

His followers did not scruple to depart from Aristotle. Theophrastus is said to have reduced the four predicables to two—definition and accident.³³ A text in Boethius suggests that Eudemus preferred a non-Aristotelian tetrad—genus, difference, definition, accident.³⁴ Quintilian observes that

³⁰ ‘Predicable’, the traditional term, is inept inasmuch as Aristotle is thinking not of items which can be predicated but of items which are predicated (of a given subject in a given proposition): see e.g. Ebert, ‘Gattungen’, pp. 117–123 (‘the Aristotelian distinction of the so-called predicables . . . is a distinction of predicated predicates, of κατηγορούμενα’: p. 123); Primavesi, *Topik*, p. 89 n. 18 (who, however, appears to imply that Porphyry’s five items are properly called ‘predicables’).

³¹ For the proof see below, pp. 303–304.

³² The argument at 102b2–19 makes the four items collectively exhaustive and mutually exclusive. In the body of the *Topics* the items remain exhaustive but they are not exclusive: see below, p. 304.—Outside *Top* the tetrad hardly appears; but note *APr* 46b26–28 (genus, property, and accident—definition being the subject of 46a31–b25).

³³ See Alexander, *in Top* 55.24–27 = Theophrastus, frag 124A; Proclus, *in Parm* 635.2–12 = frag 124B (but Alexander and Proclus differ in their reports).

³⁴ *in Int²* 361.8–22: for the emendation, ‘Eudemus’ for ‘audivimus’, see Shiel, ‘Eudemus’.

objects of definition are, in particular, genus, species, property and difference (V x 55)³⁵

—which hints at a pentad or a variant tetrad. A text in Alcinous indicates another tetrad:

God is ineffable and can be grasped by mind alone, as we have said; for he is neither genus nor species nor difference, nor does he have any accident . . . (*didask x* [165.5-7])

Apuleius has a list of five items, adding difference to the Aristotelian four (*int vi* [197.9-198.1]).³⁶ Clement of Alexandria appears to glance at yet another scheme:

For how could that be ineffable which is neither genus nor difference nor species nor individual nor number nor yet an accident nor that which has an accident? (*strom V xii 81.5*)

Alexander of Aphrodisias was loyal to Aristotle; but he considers the possibility of adding species to the tetrad—and tries to explain why species do not appear on Aristotle's list.³⁷

Porphyry, like Eudemus, has difference on his list; like Quintilian and despite Alexander, he accommodates species; and he eliminates definition. The *Introduction* is the first text in which we find the Porphyrean pentad. Porphyry does not claim it for his own. Indeed, he gives the impression that he found it in the writings of 'the older masters' (see 13.3-5; cf 3.19-20).³⁸ In any event, the Porphyrean pentad won the day, and virtually every later logician dutifully rehearsed Porphyry's five items.³⁹

³⁵ Later quoted by Julius Victor, *rhet vi 2* [398.17-18]; cf Quintilian, VII iii 2.

³⁶ Apuleius' five are not Porphyry's five, *pace* e.g. Dörrie and Baltes, *Platonismus*, III p. 259 n. 6 ('That the *quinque voces* are pre-Porphyrean is proved by Apuleius').—It is disputed whether or not *int* is by Apuleius—for whom see e.g. Flamand, 'Apulée'. (On Alcinous see e.g. Whittaker, 'Alcinoos').

³⁷ See below, p. 307.

³⁸ See below, p. 230.—Prantl, *Geschichte der Logik*, p. 627, asserts that 'it is of course out of the question that Porphyry himself was the genial inventor of the *quinque voces*, as the later and extraordinarily naive tradition always assumed'; and he finds the pentad in Theophrastus (p. 395), in the rhetorical tradition (pp. 507-508, 518), in Galen (pp. 565-566), and in Apuleius (p. 584). In none of the texts cited by Prantl is the Porphyrean pentad to be found.

³⁹ The only exceptions I have noticed are Martianus Capella, IV 344-349 (the Porphyrean pentad plus definition), and pseudo-Zeno, who, although relying on *Isag* for his account of the predicates (4.2.3-7), nonetheless lists the Aristotelian tetrad (4.2.3). (The text survives only in Armenian translation, it apparently dates from the 6th or early 7th century, and it is jejune in the extreme: see Stone and Shirinian, *Pseudo-Zeno*.)—For the pentad in modern logic see e.g. Whately, *Logic*, II v 3-4.

Plainly, Porphyry's five items derive, directly or indirectly, from reflection on Aristotle's four. Modern scholars suppose that the five constitute a closed system, like the Aristotelian four; they construe Porphyry's system as a rival to Aristotle's; and they praise or blame Porphyry for improving or debasing the Aristotelian system. Porphyry himself never remarks upon his differences from Aristotle; nor does he hint that he means to replace the Aristotelian system by a better. A comparison between the pentad and the tetrad is best deferred.⁴⁰

The following account is short, elementary, and traditional. [1.7–16]

Compare the preface to the *Introduction to Ptolemy*:

Hence, concisely and yet accurately following our predecessors, we opportunely publish this introduction, which should be comprehensible even to those not initiated into the subject. (*in Ptol tetrab* i [190.18–21])

Claims to concision are commonplace, especially in introductory works (the Greek at 1.7–8 might be translated: 'briefly, as⁴¹ in the manner of an introduction'.) Thus Theo of Smyrna:

We shall make a summary and concise exposition of those mathematical facts which are necessary and most needed by those who are to read Plato. (*Math* 1.13–16)⁴²

But Quintilian's introduction to rhetoric runs on forever; in his *Handbook to Harmonics* Nicomachus promises 'a longer and more accurate introduction . . . in several books' (*ench harm* i); Simplicius offers the 400 pages of his commentary on the *Categories* as an 'introduction and training-ground' for the study of the more advanced commentaries of Porphyry and Iamblichus (*in Cat* 3.13–17); Anatolius' *Arithmetical*

⁴⁰ See below, pp. 305–308.

⁴¹ At 1.7, 'ѡσπερ' means 'as', not 'as if': Ammonius perhaps read 'ѡς' (*in Isag* 38.12)—but the lemma at 38.8 has 'ѡσπερ'); so too the lemma in [Elias], *in Isag* xxviii 57; and the phrase is found *verbatim* at [Alexander], *febr* i 5). For the εἰσαγωγικὸς τρόπος of Ptolemy, *tetrab* I iii 20; Eusebius, *ecl proph* 3.13–14; [Galen], *hist phil* XIX 254; see Mansfeld, *Prolegomena mathematica*, p. 73 n. 254.

⁴² See also e.g. Demetrius of Laconia, *PHerc* 1012, *LI* 1–9; Nicomachus, *ench harm* i; Galen, *sect ingred* I 98; [Galen], *hist phil* XIX 254; Boethius, *div* 877A, 892A, with Magee, *Boethii*, p. 63.—For the modest 'πειράσσομαι' at 1.7 and 16 cf *quaest Hom* 1.22, with e.g. Plato, *Prot* 323C; *Phdr* 243B; Aristotle, *Phys* 184a15; 200b15–16 (Bonitz, *Index* 575b1–7); [Aristotle], *physiog* 809a26; Aelian, *tact* i 6. The word is especially common in the immodest pages of Galen.

Introductions and Eusebius' *General Elementary Introduction* each filled ten books.

The *Introduction* will limit itself to simple matters. So do all introductions—but there are levels of simplicity. Galen speaks of ‘first introductions to logical theory’ (*meth med* X 145), implying that there are second and more advanced introductions. Boethius' *On Division* is an introduction (877A); but it is not written for beginners (882D), and it presupposes an understanding of the *Categories* (883A). The *Introduction*, on the other hand, is a first introduction.

It aims ‘suitably at the more simple’ inquiries. The commentators take ‘suitably [$\sigmaυμέτρως$]’ to mean ‘appropriately to the intellectual level of Chrysaorius’ (e.g. Ammonius, *in Isag* 39.3–7);⁴³ and they also remark that the verb ‘aim [$\sigmaτοχάζεσθαι$]’ implies an unrigorous presentation—you ‘aim at’ a subject when you cannot, or do not want to, treat it in a fully scientific way. The latter point is forced; and as for the former, it is likely that Porphyry wants his essay to be suitable to its matter rather than to its addressee. Thus at *abst* II 4 he says that he will set out the views of the old masters, ‘aiming [$\sigmaτοχαζόμενος$] as far as possible at what is suitable and appropriate to the subject’; in the *Letter to Anebo* he undertakes to reply to Iamblichus’ points ‘suitably’ or at an appropriate length (ii 18b); and at *in Ptol harm* 4.23–24 his commentary ‘aims at what is suitable’.⁴⁴

Porphyry will give an exposition⁴⁵ of what the older masters (*οἱ πρεσβύτεροι*) have said.⁴⁶ The older masters of 1.8 are the old masters (*οἱ παλαιοὶ*) of 1.15.⁴⁷ The word ‘πρεσβύτεροι’ carries a hint of venerability: Porphyry is commanding his book in saying that it transmits ancient material.

⁴³ So Simplicius hopes to make Aristotle's ‘lofty thought, which is inaccessible to most people, clearer and more suitable’—that is to say, suitable to ordinary understandings (*in Cat* 3.4–5; cf 317.28–29; 427.1–2).

⁴⁴ Cf e.g. Sextus, *PH* I 217 (where ‘suitable’ is close to ‘short’); Diogenes Laertius, VII 160, at the end of his account of Stoic physics: ‘That is enough about the subject for us, aiming as we are at what is suitable for this work [$\sigmaτοχαζομένοις τῆς συμμετρίας τοῦ συγγράμματος$].’

⁴⁵ *παράδοσις*: for the concrete sense of the term see e.g. *in Cat* 60.2, 8, 9.

⁴⁶ ‘Why do the disciples transgress the tradition of the elders?’, the Pharisees asked Jesus (Matthew, xv 2). ‘Tradition’ is ‘*παράδοσις*’, and ‘elders’ is ‘*πρεσβύτεροι*’. Porphyry knew the Gospel of Matthew. Chrysaorius is said to have been ‘a member of the Roman church’ (above, p. 24). I wish I could believe that Porphyry is making a sly allusion.

⁴⁷ Boethius, *in Cat* 284A, finds a difference between ‘*antiquius*’ and ‘*senius*’ (i.e. ‘*πρεσβύτερον*’ and ‘*παλαιότερον*’ at Aristotle, *Cat* 14a27–29); cf Simplicius, *in Cat* 418.29–419.1; Ammonius, *in Cat* 103.7–8.—See also anon, *in Parm VIII* 12–21, on the two uses of ‘*πρεσβύτερος*’: ‘old’, and ‘older <than>’.

Who are the venerable masters? The words ‘πρεσβύτεροι’ and ‘παλαιοί’, and their synonym ‘ἀρχαῖοι’, are frequently found in imperial texts, often conjoined and contrasted with ‘νεώτεροι’—‘the moderns’. It is frequently supposed that ‘οἱ παλαιοί’ and the like refer to Aristotle, or to Plato, or to Aristotle and Plato, while ‘οἱ νεώτεροι’ refers to the Stoics. Often the supposition is right. But not always. Thus in *On the Faculties of the Soul* Porphyry announces that he will give the views of the old masters and then report the judgements made by his own teachers: the Stoics are mentioned alongside Plato and Aristotle as Old Masters (see *an fac* 251 = Stobaeus, *ecl* I xlix 24).⁴⁸ It is reasonable to infer from 1.8 and 15 that Porphyry will not report the views of Plotinus or of Longinus; and it would be reasonable to guess that he will report the views of Plato and Aristotle. But nothing more may be deduced from the terminology.

At 1.15 Porphyry says that he will draw especially on the Peripatetics. Aristotle is named at 6.6; and at several turns Porphyry will tacitly cite or paraphrase him. Theophrastus wrote a *Categories* (Philoponus, *in Cat* 7.21), an essay ‘On Species’ (Diogenes Laertius, V 43), and a work ‘On Differences’ (*ibid* V 46). Eudemus also wrote a *Categories* (Philoponus, l.c.).⁴⁹ Later, Strato wrote ‘On Accidents’ and ‘On Properties’ (Diogenes Laertius, V 59). Andronicus’ essay on division was admired by Porphyry (*in Soph* 169 = Boethius, *div* 875D–876D). The writings of Alexander of Aphrodisias were studied in Plotinus’ circle (*v Plot* xiv 10–14). There are numerous other Peripatetic scholars of the first and second centuries whom the learned Porphyry had doubtless read.

‘Especially the Peripatetics’ implies that there were also non-Peripatetics among Porphyry’s masters. Platonists, to be sure. Plato is named at 6.14; and there are other covert allusions.⁵⁰ Speusippus and Xenocrates wrote ‘On Genera and Species’.⁵¹ The sceptical Academy

⁴⁸ See further Additional Note (B).

⁴⁹ Bodéüs, *Catégories*, pp. xxxi–xxxiii, doubts if any early Peripatetic work was originally called ‘Categories’. He may be right—but there is no reason to doubt that Theophrastus and Eudemus wrote essays which later acquired that title.

⁵⁰ There is no reason to scent the unwritten Plato in *Isag*, *pace* Oehler, ‘Neue Fragmente’, who refers to 6.13–18, 14.10–12, and 14.21–15.2 (and also to four texts from *in Cat*). Oehler’s hypothesis starts out from a mistranslation of Ammonius, *in Isag* 46.17–21. Oehler takes Ammonius to say that Porphyry’s reference to the Peripatetics at 1.15 is an attempt to camouflage the Platonism of the work (p. 226). Ammonius says that ‘since, being a Platonist himself, Porphyry was likely to be suspected of teaching Platonic doctrines’, he refers explicitly to the Peripatetics—that is to say, he wants to make it quite clear that *Isag* is not a Platonic document (cf. David, *in Isag* 121.6–8).

⁵¹ See Diogenes Laertius, IV 2 (where the text is corrupt), 13; for the Arabic fragment of Xenocrates see below, p. 260.

will hardly have contributed much; but the later Platonists, from Antiochus onwards, had something to say on the subject matter of the *Introduction*—and Lucius and Nicostratus⁵² wrote detailed criticism of Aristotle's *Categories*.

And the Stoics? Porphyry had a capacious knowledge of Stoic logic (*in Int* 87 = Boethius, *in Int*² 71.13–18; 100 = *ibid* 201.2–6); and his long commentary on the *Categories* was stuffed with Stoic doctrines (Simplicius, *in Cat* 2.5–9). Perhaps the *Introduction* made use of Chrysippus, who wrote 'On Species and Genera' and also 'On Divisions' (Diogenes Laertius, VII 200); and perhaps it took something from Athenodorus and Cornutus,⁵³ each of whom wrote on Aristotle's *Categories*. But the Stoicisms which modern scholars have described in the *Introduction* are ghosts.⁵⁴

An idle hour in the library will double the list of Porphyry's possible benefactors—and they will be found not only among the philosophers but also in the rhetorical and the grammatical traditions. But the compilation of such catalogues is a fruitless occupation: a possible benefactor is as valuable as an imaginary thaler.

Setting aside deep questions, which demand 'another and a larger investigation', Porphyry will consider genera and the rest 'from a logical point of view [λογικώτερον]'.⁵⁵ The Greek adverb is comparative in form; but Greek comparatives are often used in a positive sense, and so it is here.⁵⁶ Boethius translates by 'probabiliter', explaining that the adverb indicates a dialectical, as opposed to a scientific, inquiry (*in Isag* 168.9–169.5; cf David, *in Isag* 120.20–121.2); and the suggestion matches a familiar Aristotelian use of the word 'λογικός'.⁵⁷ But here

⁵² On whom see Praechter, 'Nikostratos'; Moraux, *Aristotelismus* II, pp. 528–563.

⁵³ On whom see Hijmans, 'Athenodorus'; Moraux, *Aristotelismus* II, pp. 585–601; Goulet, 'Athénodore'; González, 'Cornutus'.

⁵⁴ See Additional Note (A).

⁵⁵ The phrase '... and the items before us' (1.14) is odd, as Elias notes (*in Isag* 50.2–4): perhaps delete 'αὐτῶν καὶ' or 'καὶ τῶν προκειμένων'?

⁵⁶ So e.g. Ammonius paraphrases by 'λογικώς' (*in Isag* 44.12; 45.1–2; 46.3; 88.3–4; cf e.g. *in Int* 254.1–2, and the use of 'λογικωτέρα' at Alexander, *in Met* 206.12–13).—De Libera glosses Porphyry's remark as follows: 'those Peripatetics who have treated the questions in a more logical way than the first group'—where 'the first group' are 'the authors who have posed the three problems of 1.10–12' (*Isagoge**, pp. 36–37; cf *Art*, pp. 174–175). But if the comparative form has comparative force, Porphyry contrasts not two groups of authors but two styles of treatment.

⁵⁷ So Alexander, *in Top* 30.12–13, observes that in Aristotle 'λογικώς' may mean 'διαλεκτικώς', i.e. may refer to arguments based on ἔνδοξα (cf 576.26–27; and for the equation of λογική with διαλεκτική see e.g. *in Met* 167.1–3; 210.21; 218.17).

Porphyry is thinking not of different methods of inquiry but of different questions.

According to Ammonius, ‘Porphyry means “λογικώτερον” in the sense of “in a fashion appropriate to the subject of logic”’ (*in Isag* 45.1–2; cf 53.2), and he explains that there are three methods of inquiry: the ‘logical’, which looks to the accidents of the subject; the ‘physical’, which looks to the substance; and the ‘theological’, which looks to the causes (45.5–15). This tripartition has little to do with Porphyry,⁵⁸ but Ammonius is right at bottom: Porphyry means that he will discuss his subject from a logical point of view. That is to say, he will discuss how we talk and think about genera etc:

Aristotle wrote a book on the ten types of predication [i.e. the *Categories*], and in his discussion he uses five words which are unknown to us in ordinary language—genus, difference, species, property, and accident. The philosopher Porphyry, acting no less philanthropically than philosophically, wrote this book to teach us the meanings of each of these words so that, having learned them, we might better follow what Aristotle says about the types of predication. (*ibid.* 20.15–21)

You discuss something logically or *λογικῶς* insofar as you discuss how it is spoken about or *λέγεται*.⁵⁹

To what discipline would the ‘larger investigation’ (1.13–14) belong? Not to zoology or botany, although those sciences investigate genera of animals and species of plants. Rather, to metaphysics. Aristotle expressly says that metaphysics—first philosophy or the study of entities *qua* existent—will occupy itself with genera and species (*Met* 1005a15–18);⁶⁰ and everyone knew that the *Metaphysics* contains Aristotle’s ‘secret and deeper doctrines’ (Plutarch, *Alex* vii [668CD]). The *Introduction* thus stands on the same ground as the *Categories*; for Porphyry remarks that Aristotle ‘wrote the elementary work on predication for beginners, the *Metaphysics* for those already perfect’ (*in Cat* 134.28–29).

⁵⁸ But note *ad Aneb* i 5, where ‘φιλοσόφως καὶ λογικῶς’ contrasts with ‘theurgically’.

⁵⁹ Cf Simplicius, *in Cat* 104.10–14: in *Cat* Aristotle discusses matters *λογικώτερον* inasmuch as he discusses how they *λέγεται* (cf 134.2–4; 295.14–16).—In any event, you might expect an introduction to explain the terminology of the subject (see Aelian, *tac* i 6).

⁶⁰ Cf e.g. Alexander, *in Met* 177.9–13 (*λογική* contrasted with first philosophy); Syrianus, *in Met* 18.26–27 (metaphysics is ‘deeper’ than logic); Simplicius, *in Cat* 295.14–16; Boethius, *in Int*² 185.17–19 (the issues discussed in *Int* 9 are ‘too high’ for logic and demand a metaphysician).—And already Plutarch, *adv Col* 1115E: *οἱ ὕστερον*—i.e. Aristotle and his followers in contrast to Plato—‘did not proceed higher, having fallen into logical puzzles [*λογικωτέρας ἀπορίας*]’.

Indeed, Porphyry affirms that the *Categories* ‘is extremely elementary and introduces us to all the parts of philosophy’ (*ibid* 56.28–29; cf 141.11–17). The idea is an ancient commonplace—Simplicius, for example, frequently appeals to it in order to get Aristotle out of a jam.⁶¹ Commentators found the same excuse for Porphyry:

More generally, it can be said in all cases that they criticize Porphyry inappropriately, requiring too much precision of him—for he himself indicated in advance that he would abstain from deeper inquiries and, in the manner of an introduction, engage in the more simple ones. (*Arethas, in Isag* 79.9–13; cf 81.18–19; 82.13–18)

However that may be, Porphyry promised to avoid metaphysical matters. Did he keep his promise? It is an error to hunt for hidden metaphysics beneath every line of the text,⁶² but there are one or two passages which appear to tread water too deep for Lady Logic.⁶³

For example, there will be nothing about the ontological standing of genera and species. [1.9–12]

1.12–14 is echoed in Porphyry’s commentary on the *Categories*:

What does it mean when you say that universals are said [sc of a subject] and accidents are [sc in a subject]? The matter is deep and too large for your capacities; for someone with the capacities of a beginner cannot know that accidents, like substances, are, whereas universals are not in existence but are merely said and are in thought. So let these things be left aside. (*in Cat* 75.25–29)

Porphyry was not the first to judge that the *Categories* deliberately omits some difficult matters:

Herminius says that Aristotle does not propose [sc in *Cat*] to discuss the primary and most general genera in nature (for instruction in such matters is not appropriate for the young), nor what are the primary and elemental differences . . . (*ibid*, 59.20–22)

⁶¹ See Simplicius, *in Cat* 67.5–7; 110.24–25; 264.2–4; 268.24–25; 278.6–7; 295.7–8; 317.28–29; 346.18–19; 387.23–24; 418.27–28; 427.25–26; 428.5–11. For the idea that *Cat* is elementary see also e.g. Herminius, *apud* Porphyry, *in Cat* 59.20–21; Dexippus, *in Cat* 40.20–22 (Aristotle ‘is aiming at young men who can follow the simpler issues’); Boethius, *in Cat* 252B (*Cat* ‘like an approach or bridge, opens the way to the deeper parts of philosophy’); 289c; Ammonius, *in Cat* 36.10–12.—Nothing suggests that Aristotle himself thought of *Cat* as an elementary treatise, and later students found it daunting (e.g. Galen, *lib prop* XIX 42; Augustine, *conf* IV xvi 28; Marinus, *v Procl* ix).

⁶² *Pace* Gergenti, who argues that you cannot understand *Isag* without considering Porphyry’s own metaphysical views (*Isagoge**, p. 6; pp. 31–34).

⁶³ See e.g., pp. 115, 128, 297.

These advanced issues had been raised and discussed by several philosophers, and notably by Plotinus—for

it is difficult to argue against Plotinus, the Platonic philosopher, who has puzzled so deeply on these matters. (Dexippus, *in Cat* 5.2–3)⁶⁴

They will have been among the issues which Porphyry banished from the *Introduction*.

He mentions one of the banished problems;⁶⁵ and herein lies ‘the paradox of the *Introduction*’. The work eschewed profound questions; and yet it became the starting point for all mediaeval discussions of that most profound of all metaphysical issues, ‘the problem of universals’: the most influential part of the *Introduction* is the part which Porphyry declined to write.⁶⁶ The commentators disagree on details; but they are at one in supposing that Porphyry raised ‘the problem of universals’, that he tabulated its possible solutions, and that he had in mind various champions of those solutions.⁶⁷

As for the problem, Porphyry speaks not of universals⁶⁸ but of genera and species—of two of his five items. The commentators identify universals with genera and species, supposing that every difference and property and accident is also a genus or a species: wisdom, say, is an accident of Socrates—but it is also a species of virtue.⁶⁹ Perhaps they

⁶⁴ For Plotinus on the *Categories* see below, pp. 336–337.

⁶⁵ ‘For example’ translates ‘αὐτότικα’ (1.9–10): for this common use of the adverb, which some commentators have missed, see e.g. *in Cat* 70.8; 94.13; *quaest Hom* xv [90.9]; *an fac* 253 = Stobaeus, *ecl* I xlix 25a.

⁶⁶ See esp de Libera, *Isagoge**, pp. xxxiii–xcii; 32–36; *Querelle*, pp. 34–47.—‘The text which lies at the origin of the issue of universals in western metaphysics, the text which was the starting-point for every discussion through a period which extends from the end of antiquity to the beginning of the modern age, is the *Introduction*’ (*Querelle*, p. 34). But ‘it was Boethius’ commentary on Porphyry, rather than the *Introduction* itself, which was responsible for the question of universals in the Middle Ages’ (*ibid*, p. 128—for Boethius’ interpretation of the question see de Libera, *Art*, p. 175–224). The phrase ‘paradox of the *Introduction*’ is at *Isagoge**, p. xxxiii (cf. ‘the paradox of Porphyry’, *Querelle*, p. 35; Porphyry as ‘the metaphysician malgré lui’, *ibid*, p. 34).

⁶⁷ Porphyry did not invent the problem. According to de Libera, ‘that Porphyry depends on Alexander for the very formulation of “his” problem is . . . beyond discussion’ (*Art*, p. 49). For the layout of the problem, which is unremarkable (see e.g. Aristotle, *Met* 1076a32–37), there is no close parallel in Alexander. For its content there are several parallels in Alexander—and in other authors: although Porphyry knew his Alexander, there is no reason to postulate a direct debt in the present passage.

⁶⁸ See de Libera, *Querelle*, p. 15.—The word ‘universal [*καθόλον*]’ occurs in *Isag* only at 8.17, and there adverbially.

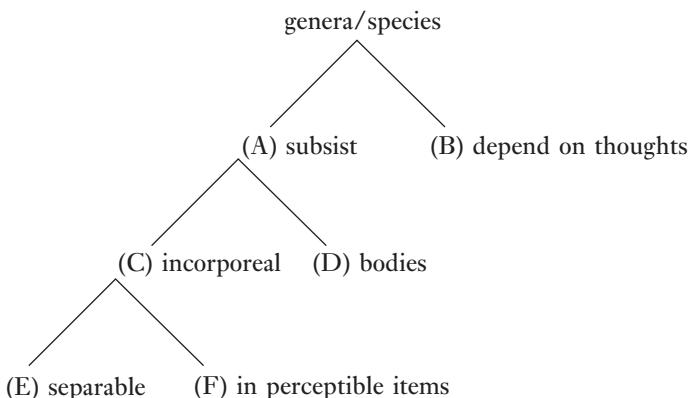
⁶⁹ e.g. Elias, *in Isag* 47.27 (are ‘universals, i.e. genera and species’ corporeal?); 48.30; Arethas, *in Isag* 11.7–13; cf [Aristotle], *Met* 1060a5 (‘the items apart from the singulars are genera and species’); Alexander, *in Met* 211.28–29 (‘universals, i.e. genera and species’); 218.7–9.

are right. Nonetheless, Porphyry gives the impression of referring to an inquiry about some rather than all of his five items.

As for the solutions, Porphyry does not suggest that his sketch is exhaustive; and whatever ‘the problem of universals’ may be, any solution to it might be expected to require more refined distinctions than those which the sketch provides. Thus in the *Sentences* Porphyry notes that the term ‘incorporeal’ can be taken in different ways—ways which must be distinguished before the word can be employed in metaphysical discussion.⁷⁰ Elsewhere, he explains that ‘man does not subsist in the same way as primary substances do but in another way’ (*in Phys.* 129 = Simplicius, *in Phys.* 94.24–25); and Marius Victorinus, drawing on a Greek Platonist and in all probability on Porphyry, distinguishes various ‘modes of being’—in particular, the ‘primary mode’, in which first causes exist, and ‘another mode’, with which he associates ‘genera, species, etc’.⁷¹

In short, 1.10–12 is not a definitive catalogue of answers to a well-defined question: it is a rough map of an area which Porphyry will not explore.

The sketch is often taken to present a sort of ‘division’, thus:



⁷⁰ See *sent.* 19, 42; note also *in Ptol. harm.* 127.28–29 (sounds are not incorporeal). Of the essay *On incorporeals* only the title has survived (Suda, s.v. *Πορφύριος*). On incorporeals in Porphyry see Dörrie, *Zetemata*, pp. 179–187.

⁷¹ See *adv. Ar.* IV 19; cf. *ad Cand.* vi (four ways of being); note also e.g. anon., *in Parm.* XII 29–35 ($\deltaι\tauτὸν τὸ εἶναι$); Apuleius, *dog Plat.* I vi 193.—The material in Victorinus is ascribed to Porphyry by Kohnke, ‘Plato’s conception’, pp. 36–37, and (with supporting argument) by P. Hadot, *Porphyre I*, pp. 148–167; see also Dörrie and Baltes, *Platonismus* IV, pp. 304–309; Robinson, ‘Phantom of the *Sophist*’.

The schema is plausible; but it is not imposed by the structure of Porphyry's Greek sentence, which takes the form: A? B? If A, then C or D? E or F?⁷²

The questions 'A? B?' go together, 'A' and 'B' forming an exclusive and presumably exhaustive pair. The terms they employ are not technical. The verb 'subsist [ὑφίστασθαι]' and its associated noun 'subsistence [ὑπόστασις]' became vogue words in late Platonic metaphysics, where scholars discover recondite senses for them; and some Stoics had earlier given a special meaning to the terms in certain contexts. But the words are common in Galen and in Sextus and in Alexander, where they mean 'exist' and 'existence'. (Galen notes expressly that the verb is a synonym of 'εἶναι' and 'ὑπάρχειν': *meth med* X 155; *inst log* iii 2. Plutarch implies as much: *comm not* 1081F.) So too in Porphyry.⁷³ (If I translate by 'subsist' rather than by 'exist', that is only in order that an English reader may track the word through Porphyry's text. 'Subsist' is to be taken as synonymous with 'exist'.)

Do genera and species exist? What is at stake? Well, if they do not exist, then they 'depend on bare thoughts alone'. The word for 'thought' is 'ἐπίνοια', another quotidian term—Porphyry uses the cognate verb as a synonym of 'νοεῖν' or 'think (of)'.⁷⁴ Nor does the addition of 'bare'

⁷² Guzzo, *Isagoge*, pp. 7–14, claims that the three pairs—AB, CD, EF—represent three ways of posing one question: 'Are universals Platonic Forms or rather Aristotelian universals *in re*?' Similarly, de Libera sees three aspects of 'the debate between Aristotle and Plato' (*Querelle*, p. 36).

⁷³ See 13.5; 17.9; 18.18; 19.1; 22.1, 22; cf 20.18; and e.g. in *Ptol harm* 37.10–11 (the νύπόστασις of melody and rhythm); 60.12–16 (of qualities).—De Libera, *Querelle*, p. 36 n. 15, says that 'ὑφίστασθαι' means 'really exist, i.e. truly, in the sense in which Platonic Ideas exist, not singular objects'. Is there such a sense?—On the history of the term see esp Witt, 'ΥΠΟΣΤΑΣΙΣ'; Dörrie, 'Υπόστασις'; cf Smith, 'Υπόστασις' (on Porphyry); Rutten, 'Υπαρξίς' (Plotinus); Courtine, 'Traductions latines' (for the Latin versions).

⁷⁴ See 13.1 and e.g. in *Cat* 90.15, 33 (where 'ἐπενοήθη' has the same force as 'ἐνοήσαμεν' in the following line); 102.27, 29; and esp 103.11–17 (below, p. 42); also *sent* 37 ('being thought of as a part [ώς μέρος ἐπινοούμενον]'); 42 ('some items are called—and thought of as—incorporeal in virtue of a lack of body . . .'); in *Phys* 129 = Simplicius, in *Phys* 93.5–6; in *Ptol harm* 94.14; in *Tim frag* 37 = Philoponus, *aet mundi* 148.19–23—a paraphrase, not a citation; see also e.g. Dexippus, in *Cat* 56.4 (where 'ἐν ἐπινοίᾳ' has the same sense as 'νοούμενον' at 56.5); Epictetus, *diss* I xiv 8; Galen, *opt med* I 55; *nat fac* II 83; *loc aff* VIII 89; Sextus, *PH* I 33; II 27; Alexander, in *Met* 198.16; *mant* 124.21–22.—Some scholars have detected a technical sense for 'ἐπίνοια' at *sent* 44 (and also at *anon*, in *Parm* IV 2; V 20—but not at I 30 or II 4 or 13): P. Hadot, *Porphyre* II, pp. 81 n. 2; 109 n. 4. Perhaps so; but that has no bearing on our passage.—Chiara donna, 'Essence et prédication', pp. 589–591, thinks that both Porphyry and Alexander have 'a technical use . . . of the term ἐπίνοια to designate the abstraction of an immanent "Aristotelian" essence' (cf de Libera, 'Aristote et Plotin', pp. 12–13). Not so.

and ‘alone’ to ‘thoughts’ create a technical formula: something ‘depends on thoughts alone’ if it depends on thoughts and on nothing else; it ‘depends on bare thoughts’ if it depends on thoughts and on nothing else; and it ‘depends on bare thoughts alone’—the expression is pleonastic—if it depends on thoughts and on nothing else.⁷⁵

The contrast between subsisting and depending on mere thought is a commonplace in Platonic texts, from Plotinus to Simplicius and beyond. Two examples:

But suppose that these things do not come to be but exist, and that we think of them [$\varepsilon\pi\omega\omega\hat{\nu}\mu\epsilon\nu$] as coming to be. (Plotinus, *enn* VI iii 14.20–21)

The philosophers of Eretria . . . laid it down that qualities are neither bodies nor incorporeal items; rather, they took them to be bare thoughts alone [$\psi\upsilon\lambda\hat{\nu}$. . . $\mu\omega\hat{\nu}\alpha\hat{\nu}\varepsilon\hat{\nu}\omega\hat{\nu}\alpha\hat{\nu}$], emptily expressed and of no subsistence—like humanity or horsehood. (Simplicius, *in Cat* 216.12–19)⁷⁶

But the contrast is not proprietary to Platonism. Sextus, for example, says that

relational items are only thought of, they do not exist. (*M* VIII 453; cf 459)

There are dozens of parallels.⁷⁷

⁷⁵ For parallel uses of ‘bare [$\psi\upsilon\lambda\hat{\nu}$]’ see *sent* 19 (some items are called incorporeal ‘in virtue of a bare privation with respect to body’); *ad Aneb* ii 5c ($\phi\alpha\tau\alpha\sigma\mu\pi\alpha\tau\alpha\psi\lambda\hat{\nu}$); *quaest Hom Iliad* II 2 [22.18–20]. The adjective is first used in this sort of way by Plato (esp *Thet* 165a: $\psi\upsilon\lambda\hat{\nu}\lambda\hat{\nu}\gamma\hat{\nu}$ contrasted with geometry); see also e.g. Epictetus, *diss* III xxi 1 (bare theorems); Alcinous, *didask* xxv [178.26–29]; Plotinus, *enn* I iii 5.10–11; and often in Sextus (e.g. *PH* II 121; *M* VII 316; VIII 435—see Barnes, *Toils*, pp. 96–98). For the pleonastic ‘bare . . . alone’ see e.g. [Aristotle], *mech* 854a17; Galen, *alim fac* VI 506; Alexander, *in AP* 279.14; Clement, *strom* I ix 43.1.—De Libera, *Querelle*, p. 37, asserts that ‘the expression . . . $\psi\upsilon\lambda\hat{\nu}\varepsilon\pi\omega\hat{\nu}\alpha\hat{\nu}\iota\alpha\hat{\nu}$. . . alludes to a technical—and non-Aristotelian—distinction between authentic concepts—“notions of realities”—and fictional concepts—“notions without any real correlate”’; but the distinction is common or garden, neither technical nor non-Aristotelian.

⁷⁶ Cf e.g. Plotinus, *enn* VI ii 13.26–28; vi 9.13–14 (cf Rutten, ‘ $\Upsilon\pi\alpha\rho\xi\iota\sigma$ ’, pp. 26–28); Galen, *san tuend* VI 25; *syn puls* IX 523; [Galen], *opt sect* I 196, 198. In later texts the same contrast is often expressed as ‘subsist vs subsist in thought’: see e.g. Proclus, *in Tim* III 95: the Stoics ‘constituted time according to bare thought as something transitory and close to what does not exist—for time was one of their incorporeals, which they misprized as being unclear and non-existent and subsisting in bare thought [$\varepsilon\nu\hat{\nu}\varepsilon\pi\omega\hat{\nu}\alpha\hat{\nu}\iota\alpha\hat{\nu}$ $\psi\upsilon\lambda\hat{\nu}\sigma\pi\alpha\hat{\nu}\mu\pi\alpha\hat{\nu}\nu\psi\lambda\hat{\nu}$]. Cf Simplicius, *in Cat* 11.8–10; 53.27–28 (‘whether universals exist or have their being in thought alone is for another study to inquire’); 189.3–4; 349.31–34; Ammonius, *in Cat* 9.25–10.1; in *Int* 184.32–185.2.

⁷⁷ e.g. Posidonius, *frag* 92 = Stobaeus, *ecl* I xi 5c; Alexander, *in Met* 229.31–230.3; 375.29–32; *quaest* iii 12 [106.3–10]; Clement, *strom* VII xvii 107.5; a Latin example: Cicero, *Top* v 26.—Comparable contrasts in e.g. Diogenes Laertius: ‘We [Pyrrhonists] are asking not whether things appear so [$\phi\alpha\pi\alpha\tau\alpha\psi\iota\alpha\hat{\nu}$] but whether they are so in subsistence [$\kappa\alpha\theta'$ $\psi\pi\alpha\sigma\tau\alpha\sigma\pi\alpha\hat{\nu}$]’ (IX 91). And in [Aristotle]: ‘In general, of phenomena in the air, some exist

A typical application of the contrast occurs in Porphyry's commentary on the *Categories*:

The surface thought of between the parts of a body is not a surface in the strict sense but a surface in thought. For if it existed in actuality, it would cut the body and be a limit of the bodies. Inasmuch as a body can be cut by a surface, if you think of it as the limit of one part and the beginning of another, the surface is a common boundary of the parts of the body, not existing but being thought of. (*in Cat* 103.11–17; cf 102.26–32)

If you think of pruning the branch just there, the surface of the proposed cut depends on bare thought alone.⁷⁸

Porphyry was not the first to apply the contrast to the question of genera and species—Sextus' sceptical attack is organized about it:

If they say that genera and species are thoughts [*έννοήματα*], then . . . If they ascribe to them a subsistence of their own [*ἰδίαν ὑπόστασιν*], then . . . (*PH* II 219)

But what exactly is the sense of the contrast? At least two distinctions appear in the ancient texts. First, there is a distinction between what is natural and what is mind-dependent. There is a clear example in Ammonius:

Symbols or signs . . . depend wholly on us inasmuch as they subsist on the basis of our thought alone. (*in Int* 20.6–8; cf 62.27–28).

Secondly, there is a distinction between what exists and what is imaginary—where goat-stags and centaurs form the stock examples of items which, in this sense, 'depend on bare thoughts alone'.

The two distinctions are distinct. Symbols and signs are mind-dependent—a word is not a symbol for a thing except insofar as it is deemed to be so. But symbols and signs are real entities—it is not a fantasy to suppose that the English word 'Paris' designates the capital of France. Goat-stags and centaurs are mind-dependent inasmuch as they

by reflection and others in subsistence: by reflection—rainbows, streaks of light, and the like; in subsistence—lights and shooting-stars and comets and so on' (*mund* 395a29–31; cf Stobaeus, *eccl* I xxx 1). The latter passage may be attributed 'with high probability' to Posidonius, according to Dörrie, 'Υπόστασις', p. 55.

⁷⁸ And after the branch is pruned? 'We should not think that such limits—I mean the limits of bodies—subsist in mere thought, as the Stoics supposed' (Proclus, *in Eucl* 89.15–18). But not all Stoics held such a view of the matter: 'A surface is a limit of a body, or what has only length and breadth and not depth; in the fifth book of his *Meteorology* Posidonius says that surfaces are both in thought and in subsistence' (frag 16 = Diogenes Laertius VII 135).

are fabrications of the human imagination. But they are not mind-dependent entities; for they are not entities at all. Does Porphyry's 'A or B?' ask whether genera and species are natural items rather than creations of the mind? or does it ask whether they are real items rather than fantasies?

The commentators opt for the latter question; and the thesis that genera are imaginary items has been ascribed to the Stoics, according to whom

a genus is a collection of several undetachable thoughts [*έννογματα*], e.g. animal—for animal contains the particular animals. A thought is a presentation of the mind, being neither a something nor a qualified item but a sort of something and a sort of qualified item . . . (Diogenes Laertius, VII 60)

Since genera are thoughts, and thoughts are not 'somethings', then genera are not somethings—and so are imaginary fabrications like the chimaera.⁷⁹

Alexander expressly rejects the idea that genera are 'mere thoughts without existence' (*in Top* 355.12–14). But he sometimes says that universals or common items are mind-dependent:

they no longer exist if they are not being thought of; hence separated from the mind which thinks of them, they perish—if their existence depends on being thought of. (*an* 90.6–8)

And Philoponus attributes to Alexander the thesis that 'animal as universal and as genus . . . has its subsistence in being thought of' (*in An* 38.1–4)—it is not a fantasy but it is mind-dependent.

The Stoics, and Alexander, were no doubt subtler than these extracts suggest;⁸⁰ but the extracts are enough to show that both versions of 'on bare thoughts alone' had been entertained. Perhaps Porphyry's question, 'Do they depend on bare thoughts alone?', was intended to cover both notions?

If A, then C or D? If genera and species subsist, then are they bodies or incorporeal items? This has seemed the least opaque of Porphyry's questions—and most commentators have supposed that it is also the easiest to answer: whatever you may say about genera, you surely will not take them to be bodies? No doubt the question is reasonably plain—

⁷⁹ See e.g. Long and Sedley, *Hellenistic Philosophers* I, pp. 181–183, who suggest that, on the Stoic view, universals are 'spurious individuals', like 'the Average Man' (p. 181).

⁸⁰ On Alexander, see further below, p. 47.

so long as it is remembered that Porphyry detected an ambiguity in the term 'incorporeal'.

Finally, 'E or F?' Are genera and species 'separable' or 'are they in perceptible items and subsist about them'?⁸¹ The commentators took this question to presuppose that genera and species are incorporeal; to ask about the relation between such incorporeal items and perceptible bodies; and to offer three possible answers: either genera and species exist separately from any perceptible individuals, or they are in perceptible individuals, or they subsist about perceptible individuals. The three answers, they add, are all correct. For there are three varieties of universal: universals 'before' the particulars, which subsist in the mind of the demiurgic divinity and are separate from perceptible individuals; universals 'on' the particulars—the man exemplified in Socrates and the horse instantiated in Bucephalus, which are inseparable from and 'in' perceptible objects; and universals 'after' the particulars—my concept of an ox or a zebu, which is not in any particular ox or zebu but which is 'about' and dependent upon a perceptible individual, namely myself.⁸²

This tripartite theory is not found in explicit form before the fifth century; and although it has a pre-history, it should not be read into Porphyry.⁸³ Porphyry is offering two possible answers rather than three: 'be in' and 'subsist about' are two expressions for the same thing. The choice of prepositions suggests that if Y is 'in and about' X, then Y is a quality or feature or characteristic of X (and not, say, a part of X).⁸⁴ It is in any case plain that what is 'in and about X' has a one-sided depend-

⁸¹ The syntax at 1.12 is ambiguous: 'be in and subsist about' or 'subsist in and about'? I follow the ancient commentators in preferring the former version (e.g. Elias, in *Isag* 49.22–24; anon. Syr, in *Isag* 231.15–17).

⁸² See e.g. Simplicius, in *Cat* 82.35–83.16; Philoponus, in *Phys* 11.24–12.2; Ammonius, in *Cat* 41.5–11 (below, p. 259 n. 9); and cf Ammonius, in *Isag* 41.20–42.22; 104.27–105.12; Philoponus, in *Isag* 206.40–207.13; Elias, in *Isag* 49.22–24; David, in *Isag* 120.8–14. See Lloyd, 'Predication'; id, *Anatomy*, pp. 66–68; Hoffmann, 'Théologie'; de Libera, *Querelle*, pp. 103–105; id, *Isagoge**, pp. LXXXIX–XCII.

⁸³ Lloyd, 'Neoplatonic logic', pp. 59–62, finds the origins of the theory in 'middle Platonism', citing Alcinous' distinction among first intelligibles, second intelligibles, and concepts (*didask* iv [155.39–42; 156.19–23]); and on the strength of this Maioli, *Isagoge**, pp. 42–46, ascribes the tripartition itself to Porphyry. De Libera, 'Aristote et Plotin', p. 11, finds the tripartition at *sent* 42. I cannot see it there: the Porphyrean text which comes closest to the theory—but not very close—is in *Ptol harm* 14.6–22.

⁸⁴ See e.g. *sent* 5 ('qualities and enmattered forms, being about bodies, . . .')—and thus contrasting with 'the matterless qualities, which subsist in their own right and are not qualities but substances': in *Cat* 138.30–32). If genera and species are incorporeal, then we should not take 'in and about' in a locational sense; for 'items incorporeal in their own right are not spatially present in bodies' (*sent* 3).

ence on X: Y is inseparable from X, inasmuch as its existence depends on the existence of X, but X is not similarly inseparable from Y.⁸⁵

The question ‘E or F?’ is therefore this: Does the species horse, say, exist separately from Bucephalus and the other individual horses, or is it merely a feature of those beasts? The question does not presuppose that the species horse is incorporeal: you might take it to be a body scattered round among the individual horses. (And some ancients thought that features or qualities were bodies.) Porphyry’s text does not formally subordinate ‘E or F?’ to ‘incorporeal’; and there is no philosophical need to impose such a subordination.

The question of corporeality arises in another connection. In posing question F, Porphyry speaks of perceptible items, not of individual items: why ‘perceptible’? Why not think that the species even number is ‘in and about’ imperceptible individuals—namely, the integers?

Often in Peripatetic texts the word ‘*αἰσθητόν*’ occurs where we expect a term meaning ‘individual’. For example, at *in APr* 33.1–14, Alexander discusses the ‘ecthetic’ proof of the conversion of ‘A holds of no B’; and he says that it appeals to *αἰσθητά*. In fact, the proof appeals to individuals: it has nothing to do with perception. Now Aristotle frequently affirms that all perceptible items are individuals; and the later Peripatetics echo him.⁸⁶ Aristotle also writes, often enough, as though all individuals were perceptible—and again he is followed by his hounds.⁸⁷ So perhaps ‘perceptible item’ comes to mean ‘individual’? Then consider a text such as the following:

⁸⁵ For ‘in and about’ see e.g. Aristotle, *Cat* 7b38–39; *Top* 125a33; Alexander, *in Top* 342.1–2; Plotinus, *enn* VI iii 6.25–26 (‘In general, white has being insofar as it is about what exists and in what exists’); Simplicius, *in Cat* 84.27–28; 115.12–13; 371.11–12. ‘In’ is ambiguous (see *in Cat* 77.18–78.21; Alexander, *in Met* 421.20–29; Aristotle, *Phys* 210a14–24; *Met* 1023a23–25). At *Top* 113a24–32, Aristotle considers the question of whether Platonic Ideas are ‘in us’. This has been interpreted in two ways: that Ideas are our thoughts, and that Ideas are features of us (see e.g. Primavesi, *Topik*, pp. 210–211). The addition of ‘and about’ was perhaps intended to resolve the ambiguity.—In some Plotinian texts a distinction is drawn between being ‘in’ an item and being ‘about’ it: e.g. *enn* VI iii 3.3–5; and see anon, *in Parm* IV 3 (where relations are ‘about’ but not ‘in’ their relata). But this distinction is hardly pertinent to Porphyry.

⁸⁶ e.g. *APst* 87b37–38; 100a16–18; *Cael* 278a10–11; *An* 417b27; Aspasius, *in EN* 21.3; Alexander, *in APr* 291.11–14; *in An* 87.13–14; *in Met* 55.11–12; 79.16–17.

⁸⁷ e.g. *APr* 43a27; *MA* 698a11–12; *Met* 999b1–4; 1040b30–32; 1077a5–7; 1086a37–b1; Aspasius, *in EN* 120.31–33; Alexander, *in APr* 33.3–4; 104.4–5; *in Top* 86.23–24; *in Met* 4.28–5.1; 52.14–15; 81.26–29. One Aristotelian text goes against this consensus: ‘As for composite items, e.g. this circle—one of the singulars, whether perceptible or thinkable (by thinkable, I mean mathematical circles; by perceptible, circles of bronze or wood)’ (*Met* 1036a2–5; cf 1037a2–5).

Mathematical items have the sort of similarity found among ‘the many’, i.e. among perceptible items or singulars, in which indeed they inhere. For they subsist not in their own right but in thought. (Alexander, *in Met* 52.13–16)

‘Perceptible items or singulars’: the word ‘or’ might be construed as epexegetical.

The conclusion is tempting, but incorrect. Alexander’s account of ethetic proof shows that, in his view, such proofs actually do appeal to perception (*in APr* 99.31–100.22; cf 101.5–6; 113.1). The Peripatetic thesis that an item is perceptible if and only if it is an individual is not a tautology: it is the conjunction of two substantive—and rather implausible—metaphysical theses.

However that may be, in asking ‘E or F?’, Porphyry broaches what Sextus calls ‘the puzzle brought against genera’ (*M IV* 7; X 291). The puzzle is Aristotelian:

The next puzzle, on which our argument has now embarked, is the most difficult of all and the most indispensable to study. For if there is nothing apart from singular items and if singular items are infinite, then how can one gain knowledge of items which are infinite? For we recognize each item insofar as it is some one and the same thing, and insofar as something universal holds of it. But if this is necessary, and if there must be something apart from singular items, then the genera—either the first or the last—must exist apart from the singular items. And we have just urged that this is impossible. (Aristotle, *Met* 999a24–b3)

And the puzzle classically marks the fundamental divide between Platonic and Aristotelian metaphysics.

As Porphyry put it,

Aristotle considered only the species which are found in matter and said that they were principles: Plato imagined in addition separable species and so introduced the paradigmatic principles. (*in Phys* 120 = Simplicius, *in Phys* 10.32–35)

In answer to ‘E or F?’, ‘Separable or in and about?’, Aristotle said ‘F’ and Plato said ‘E’.

That Platonic species—or Forms—are separable from their particular instances is a commonplace.⁸⁸ A canonical expression of the thesis was found at *Parm* 130BC, where Plato is taken to affirm that a species such as man is separate from the individuals which participate in it—that the word ‘εἶδος’ is here to be construed as ‘species’ is proved by 129c, where Plato talks of ‘genera and species [$\gammaένη\tauε\kai\epsilon\iotaδη$]’.

⁸⁸ See e.g. the exposition by the non-Platonist Seneca, *ep* lxv 4–7.

That Aristotelian genera and species exist ‘in and about’ singular items is equally a commonplace. Thus Alexander:

Genera are neither items somehow subsisting by themselves nor are they bare thoughts without existence [$\psi\iota\lambda\dot{\alpha}\chi\omega\rho\dot{\iota}\dot{\iota}\dot{\alpha}\pi\acute{\alpha}\rho\acute{\iota}\dot{\epsilon}\omega\dot{\iota}\nu\acute{\iota}\acute{\mu}\acute{\alpha}\tau\alpha$], like the centaur. Rather, their subsistence is in the items of which they are predicated. (*in Top* 355.12-14)

Or again:

Do the principles have a subsistence of their own and in their own right, like individual entities? Or is it not rather that, like genera and universals and common items, their being lies in being predicated of individuals? (*in Met* 180.3-6)

The species man is ‘in’, or predicated of, individual perceptible men; and it exists insofar as it is so predicated.⁸⁹

Porphyry will not raise these deep questions; and the views which he will rehearse, although they are in the main Peripatetic, do not impose Peripatetic answers to them.

Porphyry’s questions, in the rough form in which he sets them out, take a few things for granted. For example, they suppose that the same answers will be forthcoming for species as for genera. But some Peripatetics had suggested that

whereas a genus is a non-subsistent thought . . . and is either nothing at all or else posterior to singular items, a species is a sort of nature and form—for the account of man needs only matter and it is thereby a man. (*Themistius, in An* 3.32-37)

Perhaps the status of genera is different from the status of species? Again, Porphyry’s questions suppose that the same answers will be forthcoming for all genera; but perhaps some genera are imaginary and others real, some incorporeal and others corporeal?

⁸⁹ Cf e.g. *in An* 90.4-5; *in Top* 60.29-61.1 (‘just as men are the same as one another, so too is man the same as himself, as genus and as species—for his being is in them’); *in Met* 121.12-13. Similarly, ‘the mathematical’ are ‘in’ perceptible objects: *in Met* 200.37-38. And Simplicius, *in Cat* 82.7-9: according to the Peripatetics, ‘common items are not in subsistence at all in their own right—they have their being in the individuals’.—The snippets from Alexander which I have quoted scarcely present a coherent picture; and it is easy to add to the disorder. Here are three texts: ‘Instead of the names in the definitions, whether they are genera or differences, you should take their definitions . . .’ (*in Top* 463.9-10); ‘A genus, taken as a genus, is not an underlying object of any sort but only a name, and its being common is found in being thought of and not in any subsistence’ (*quaest ii 28* [78.18-20]); ‘The subsistence of a genus is merely in the imagination of one who has the imagination’ (*in Xenoc* p. 8). For discussion see Lloyd, *Form and Universal*, pp. 49-61; Tweedale, ‘Alexander on universals’; Sharples, ‘Alexander’, pp. 1199-1202; de Libera, *Art*, pp. 25-157.

It might also be wondered how deep Porphyry's questions are. Consider some species—the Wigginsia, say, which is a sort of prickly cactus. Does it 'depend on bare thoughts alone'? Surely not: it subsists in various arid regions of the world. It is neither imaginary nor otherwise mind-dependent. Is it incorporeal? It is a type of plant—and plants are pretty corporeal things. Is it separable from perceptible items? Is there any Wigginsia apart from the particular Wigginsias which you will see here and there in desert areas? What a strange question.

Porphyry's questions, once they are given a concrete statement, seem easy—if not superficial. But no doubt all this misses the point: the questions do not concern individual specimens of the species Wigginsia—they concern the species itself. So consider a few sentences which speak of the species:

The Wigginsia is late-flowering.

The Wigginsia is a succulent.

The Wigginsia is a hardy perennial.

What do such sentences mean? Aristotle's answer can be deduced from the following text:

The opinion about the good that it is good—if the good is universal—is the same as the opinion that whatever is good is good; and this is no different from the opinion that everything which is good is good. (*Int* 24a6–9)

The opinion about the Wigginsia that it is late-flowering—if the Wigginsia is a species—is no different from the opinion that every Wigginsia is late-flowering. As Porphyry puts it,

the partition observed in these cases is a plurality, even if genus and species are spoken of in the singular—just as 'plurality' itself, and 'horse' [$\tauὸ\ πλῆθος\ αὐτὸ\ καὶ\ ἡ\ ἵππος$], even if they are said in the singular, manifest a plurality. (*in Phys* 129 = Simplicius, *in Phys* 93.10–11)

A species is a group or plurality of items: to talk of a species is to talk of a plurality of items—of items in the plural.

Not that sentences about species are to be rejected in favour of sentences about specimens. The sentence

The Wigginsia is late-flowering

is thoroughly decent, and it is about the species. But it is about the species insofar as it is about individual specimens.

There are recalcitrant cases. Here are two, quite different from one another:

The Wigginsia is my aunt's favourite plant.

The Wigginsia is a species, not a genus.

It is not evident that these sentences say something about individual Wigginsias—the first does not say that every Wigginsia is my aunt's favourite, and the second does not say that every Wigginsia is a species. It is difficult to determine what they do say; and so there are some difficult questions about species. But such difficulties have only a remote connection with the matters traditionally discussed under the rubric of 'the problem of universals'; and some will wonder if Porphyry raised a problem or rather a dust.

§ I : GENERA

The terms ‘genus’ and ‘species’ have several senses. [1.18]

Genera and species are not so called simply: ‘simply [$\delta\pi\lambda\hat{\omega}s$]’ here contrasts with ‘in several ways’—as Ammonius puts it, Porphyry is following ‘the Aristotelian rule’ which requires us to begin any inquiry by distinguishing the ambiguities in its chief terms and indicating their pertinent senses.¹ Porphyry thinks that genera, species, and differences are all so called in several ways (*in Cat* 82.5–6). (The case of property is less clear; and Porphyry does not note that ‘accident’ is ambiguous.) Why not allude to all the ambiguities at the start?² Boethius, who affirms that all five words are ambiguous, guesses that Porphyry wants to ‘avoid prolixity’ (*in Isag*² 171.14–21; cf 200.1–2). There is a better suggestion. At 8.4–6 Porphyry remarks that he has now explained what genera and species are, and shown that the two terms are ambiguous; that is to say, he treats the first two words as twins—and, as we shall see, he has a reason for doing so.

Is ‘ambiguity’ the right word? Expressions of the form ‘Xs are so called in thus many ways’³ often indicate ambiguities or differences of sense; and Porphyry’s use of the word ‘meaning [$\sigma\eta\mu\alpha\nu\delta\mu\epsilon\nu\nu\tau$]’ at 1.20 and 2.5 might appear to support the notion that he has senses in mind.⁴

¹ *in Isag* 48.18–49.6; cf 69.18–21; 92.1–2; cf Elias, *in Isag* 51.23–27 (‘the canons set out by Aristotle in the *Topics*’); David, *in Isag* 122.28–123.18 (referring to ‘the *Apodeictics*’); 136.11; 143.18; 201.5; 204.30. The rule is already found in e.g. Clement, *strom* VIII vi 17.1 (without reference to Aristotle); and it was later a commonplace—e.g. John of Damascus, *dia* 9. You will seek it in vain in Aristotle.—For the use of ‘ $\delta\pi\lambda\hat{\omega}s$ ’ in this way see e.g. Aristotle, *Top* 130a15; 158b10; Alexander, *in Top* 379.1–2; 543.7–8; Boethius, *div* 889A.

² And why ‘it seems’? The commentators suppose that Porphyry wants to stress from the start that he is offering other men’s opinions: ‘“it seems”: i.e. to the older masters’ (anon Syr, *in Isag* 232.5–6; cf e.g. Ammonius, *in Isag* 49.8; and note Eutocius on the word ‘ $\delta\omega\kappa\epsilon\iota$ ’ at 2.12, *apud* Arethas, *in Isag* 20.29–35). But ‘ $\xi\omega\kappa\epsilon$ ’ cannot carry such a sense: it is merely a modest ‘perhaps’ (as at 2.5)—with an unconscious reminiscence of Aristotle, *EN* 1129a26–27?

³ The Greek phrase at 1.18 might be rendered ‘The word “genus” is used . . .’ rather than ‘Genera are so called . . .’. Similar phrases are present in a hundred Peripatetic texts, and they raise similar questions. Here the recurrence of ‘ $\lambda\acute{e}\gamma\epsilon\tau\alpha$ ’ at 1.19, 20 and 23 seems to favour the option I have taken in the translation.

⁴ See e.g. *in Cat* 62.29; 64.30; 65.2, 4; 77.37; 108.30; and *sent* 32: ‘Since purification is, in one case, that which is purifying, and in another the state of those who have been purified, the purifying virtues are considered in respect of both meanings [$\sigma\eta\mu\alpha\nu\delta\mu\epsilon\nu\nu\tau\alpha$] of purification.’ Here the $\sigma\eta\mu\alpha\nu\delta\mu\epsilon\nu\nu\tau\alpha$ surely are senses.

But meanings may as well be referents as senses; and ‘Xs are so called in thus many ways’ need not signal an ambiguity. For example:

Man is so called in two ways, both as substance and as universal (and not one of the particulars). (*in Cat* 75.5–6)

Porphyry can scarcely have thought that the word ‘man’ had different senses in, say,

This man is late again,
Socrates is a man,

and

Man is an animal.⁵

Porphyry himself distinguishes ambiguity from other cases in which items are so called in several ways:

Being so called in several ways means, first, being so called homonymously, and secondly, being so called differently . . . If ‘in several ways’ had been meant as ‘homonymously’, the division would have been one of an expression into meanings; but since ‘in several ways’ is meant as ‘differently’, the division is one of a genus into species. (*in Cat* 128.20–25)

Simplicius repeats the distinction (*in Cat* 367.11–13). So does Boethius (*in Cat* 241B)—who also has a threefold distinction: first, ‘division into several meanings’; secondly, cases in which a word means ‘in different ways [modi]’—thus ‘infinite’ when applied to the world indicates infinity in size, when applied to the division of bodies infinity in multitude, when applied to figures infinity in kind, but in all cases its meaning is the same; and thirdly, indetermination—thus the sentence ‘Give it to me’ is indeterminate so long as you do not know what ‘it’ refers to.⁶

Alexander also shows himself alive to some pertinent distinctions:

Genera and species are said in many ways—for each is said of several items. But since the items of which they are predicated do not differ in respect of species or of the account given in respect of their common name, neither genera nor species are called homonymous or amphibolous. (*in Top* 97.24–27)

Elsewhere, he implies that being so called in many ways is a matter of ‘meaning different natures’.⁷ That is to say, if something is predicated

⁵ See further below, pp. 327–329.

⁶ *div* 888D–889C; for indeterminacy see Porphyry’s example at *in Cat* 65.4–7: ‘Give me a drachma?’—do you want a gold one or a silver?

⁷ *in Top* 100.20–21; cf 556.18–19; *in Met* 280.1–2; and at *in Top* 181.1–2 and 395.18–19, ‘what is meant’ is identified with ‘what underlies’, i.e. with the referent.

of items in different species, then it is said in many ways. But that does not introduce a homonymy or ambiguity.

Does Porphyry mean that genera and species are so called homonymously or that they are so called differently? The former seems more likely, even if there is no clinching argument.

In *Met* Δ 28, Aristotle first distinguishes four ways in which things are called genera (1024a29–b6), and then reduces the four to three:

Thus genera are so-called in this number of ways: in respect of a continuous generation of the same species; in respect of the first mover in the same species; in the way of matter. (*Met* 1024b6–9)

The three Aristotelian ways have a rough correspondence with the three senses which Porphyry will set out; and Δ 28 was at the back of his mind.

The list in Δ 28 is not exhaustive—for example, it omits the grammatical sense, in which a genus is a gender (e.g. Aristotle, *Rhet* 1407b7).⁸ Aristotle advises us to ‘distinguish senses in as many ways as is useful’ (*Top* 110b28—cf Alexander, *in Top* 153.31–33); and Ammonius suggests that Porphyry is here limiting himself to senses pertinent to logic (*in Isag* 52.16–53.2; cf 69.21–24). But neither the first nor the second of Porphyry’s senses has anything to do with logic. Rather, he records them because they explain the development of the third and pertinent sense.

In a first sense, a genus is a group united by reference to some one item. [1.18–23]

A genus, in the first sense, is an assembly or group of people linked by a relation to some one object and to one another.⁹ The clause ‘and to

⁸ See e.g. scholia to Dionysius Thrax *GG* I iii 361.18–23: ‘genus’ has four senses—it means your fatherland, your begetter, genus in the sense of the philosophers, gender. For the third sense the scholiast quotes Porphyry without naming him. The first two senses come from splitting Porphyry’s second sense (cf anon, *in Isag* IV 115–116). The rhetorical tradition provides a different classification: ‘This word “genus” has a triple meaning: a genus is fatherland, father, origin, blood . . . Again, a genus is that under which several items descending from the same item are included—e.g. animal is a genus . . . The third genus is that by which a quality of something is indicated—if you say: “Of what genus is that suit?”’ (Victorinus, *in rhet Cic* I 5 [171.6–12]; cf I 8 [180.35–38]; 44 [251.22–26]).

⁹ For ‘assembly [ἀθητούσις]’ and ‘assemblage [ἀθητούσματα]’ (2.10) see below, p. 152.—At 1.20 ‘relation’ translates ‘σχέσις’: cf 5.7–13; *in Cat* 57.24; 60.22; 70.25; *in Ptol harm* 9.6; 12.10; and numerous other texts. The word is common in imperial philosophy

one another' is superfluous; for the mutual relation among the members is no more than the fact that each member has the same relation to the one object (see 1.21-22—Porphyry drops the clause at 2.8-9). A group or assembly, *G*, is a genus in this sense if and only if there is an item *b* and a relation *R* such that *a* is in *G* if and only if *a* stands in *R* to *b*. When Homer speaks of 'their blood and their genus', then

'their genus' means either their children, i.e. their descendants, or else their genus, i.e. their brothers and those of the same generation. (*quaest Hom Od VIII* 583 [80.16-18])

So Homer is thinking of a group like the Heraclids.

The members of *G* must be persons, as the Greek masculine plurals at 1.19 indicate; the item *b* need not be a person, as the neuter singular shows. But several questions are left open by Porphyry's characterization. What constraints are to be put on the relation *R*? (Are the citizens of Geneva or the members of Balliol a genus?) May *b* be a member of *G*? (Do the admirers of Hegel constitute a genus?) Must *G* be named from *b*? (Are the sovereigns of England a genus?) David asserts that the members of *G* must take their name from *b*, which must also be their causal origin (*in Isag* 123.21-26; cf. 126.25-127.5). But this goes beyond the text.

Plotinus moots the possibility that the several sorts of substance—intelligible substance, matter, form, etc—might constitute not a true genus but a sort of quasi-genus,¹⁰

as if you were to call the genus of Heraclids a single item—not as being common to all but as derived from one item. (*enn* VI i 3.3-4)

The Heraclids form a group not in virtue of any common feature but by their shared derivation from Hercules.¹¹ Porphyry knew this text; but there is no reason to think that it is his 'source'.¹² Nor does the phrase

(e.g. Sextus, *M* VII 168; Alexander, *in Top* 45.6-7; Plotinus, *enn* II iv 13.28). It is a nominalization of the verbal phrase 'πρός τί πως ἔχειν', which occurs at 1.19 ('somehow related to one another [έχόντων πως πρός ἀλλήλους]' and which is Aristotelian (e.g. *Cat* 8a32, b1-3; *APr* 41a4). An item is relational or *πρός τι* just in case it 'stands in some way to something [πρός τί πως ἔχει]' (see esp *in Cat* 124.15-125.5). There is no cause to invoke the Stoics: see Additional Note (A).

¹⁰ See below, pp. 123-124.

¹¹ 'being derived from Hercules', a relational term, does not pick out a genuine feature: below, pp. 61-62.

¹² *Pace* de Libera, *Isagoge**, pp. xxx-xxxii. The Heraclids are not found in *Met* Δ 28; but they are adduced by Alexander (*in Met* 428.20-21; 429.24), who has imported them from *Met* 1058a24. Perhaps Porphyry has Alexander at the back of his mind, or Aristotle, or Plato (*Alc* I 120E-121C, or *Tht* 175A, or *Legg* 685E). He refers to the Heraclids elsewhere: *phil hist* 200 = *aneed graec* II 140 Cramer.

'to some one item' allude to that form of ambiguity which Aristotle characterized by the expression 'from one item and with reference to one item' and which is customarily called focal meaning. For Porphyry does not mean that 'Heraclid' has focal meaning, nor that different Heraclids are so-called in virtue of different relations to Hercules.¹³

Aristotle describes his first sort of genus thus:

We speak of a genus . . . if the generation of the items of the same species is continuous—e.g. we say 'as long as the genus of men exists', meaning 'as long as their generation is continuous'. (*Met* 1028a29–31)

This is similar to Porphyry's first sense of 'genus'. But Porphyry does not mention continuity, nor does he say that a genus must be held together by ties of generation. On the other hand, Aristotle's account does not require a single item to which all the members of the genus are related.¹⁴

In a second sense, a genus is a thing's origin—this is the primary sense of the word. [1.23–2.10]

Something is your genus in the second sense if it is your origin—either your ancestor or your fatherland: Er is 'by genus, of Pamphylius' (Plato, *Rep* 614c), and a visitor to Athens is 'by genus, from Elea' (*Soph* 216a). Plotinus

could not bear to say anything either about his genus or about his parents or about his fatherland (*v Plot* i 3–4)

¹³ *Pace* Lloyd, 'Later Neoplatonists', p. 321; de Libera, *Isagoge**, p. 38; and [Elias], who says that the Heraclids form an ordered group: 'for the Heraclids are named from Hercules, and of them Hyllus was the first and the others later' (*in Isag* xx 34).—On focal meaning see below, pp. 121–123.—For relations being 'from' and 'to' items see *in Cat* 112.8–10.

¹⁴ For 'κατὰ ἀποτομήν' at 1.22 see e.g. Sextus, *M* VII 446.—The received text at 1.21–23 is difficult: the syntax of 'τοῦ πλήθους . . .' is obscure; and since the accusative, 'τὴν . . . οἰκειότητα', must depend on 'ἐχόντων', the phrase 'ἐχόντων πως πρὸς ἀλλήλους' has to be taken with one construction at 1.19 and with another at 1.21–23. The second difficulty is best resolved by adding, say, 'παρά' before 'τὴν ἀπ' ἐκείνου'. (The term 'Heraclid' is a patronym, and all patronyms are paronyms: *ad Gedal* 54 = Simplicius, *in Cat* 38.1–6.) As for the first difficulty, I incline to take 'τοῦ πλήθους . . . κεκλημένου . . .', as a genitive absolute, deleting the 'κατ' before 'τοῦ πλήθους'. (For the genitive 'κεκλημένου' some MSS have an accusative. Boethius' translation gives 'dictam'—but his Latin accusative is ambiguous.)

—the second and third clauses expand rather than add to the first.

Aristotle describes his second sort of genus as follows:

That from which they are and which first moved them into being; for in this way we speak of Hellenes by genus, or Ionians—insofar as the former are from Hellen and the latter from Ion as first mover. And rather from the begetter than from the matter—for people are also called a genus from the female, e.g. from Pyrrha. (*Met* 1024a31–36)

Porphyry prefers ‘progenitor’ to Aristotle’s abstract ‘mover’.¹⁵ He adds the reference to fatherland—but not off his own bat; for Alexander explains why Aristotle had not mentioned it and thereby shows that some had wished to add it (*in Met* 428.26–28).

But Porphyry’s second sense of ‘genus’ is misdescribed. You do not say that an ancestor or a country is someone’s genus: when you say that Plato is Athenian ‘by genus’, you mean that Plato belongs to the genus of the Athenians, not that Athens is his genus. As Porphyry elsewhere writes:

All Brahmins are of one genus; for they all descend from one father and one mother. (*abst* IV 17)

Perhaps Porphyry misread Aristotle? At 1024a31–32 Aristotle implies that the first mover is the genus (cf Alexander, *in Met* 428.17–18); but the following sentences show that he took the group determined by the first mover, not the mover itself, to be the genus.

Then is the second sense simply a special case of the first? (See Boethius, *in Isag*² 176.8–24.) No: the question ‘Whence or from whom do you come?’ is not a special case of the question ‘To what group do you belong?’; for you might be the sole offspring of X or the sole native inhabitant of Y.

Porphyry suggests that the second sense¹⁶ of ‘genus’ is ‘near to hand [$\piρόχειρος$]’; and he explains the suggestion by an appeal to the history of the word: the Heraclids, who are a genus in the first sense, consist of

¹⁵ His word is ‘ $\delta\tauέκων$ ’: ‘ $\tauίκτειν$ ’ means ‘engender’ (of either parent), so that ‘ $\delta\tauέκων$ ’ should mean ‘father’ (cf 2.5); but the examples show that Porphyry intends it in the sense of ‘(male) ancestor’ (Hercules was Hyllus’ father, Tantalus was great-great-grandfather of Orestes—cf 6.2–3).

¹⁶ At 2.5 ‘this meaning’ designates the second of the two senses (e.g. Boethius, *in Isag* 176.5–7; *pace* Ammonius, *in Isag* 51.9–16—who then gets into a tangle: 51.17–52.15).—At 2.6 the Greek is not easy: I suppose that ‘ $\mathcal{H}\rhoακλέον$ ’ is in apposition to ‘ $\gammaένοντος$ ’, so that ‘the genus of Hercules’ must be taken to mean ‘the genus which is Hercules’.

those who descend from Hercules (and so invoke him as their genus in the second sense) together with their kinsfolk; and the word ‘genus’ first meant ‘origin’ and later was used of a group deriving from a single origin—and hence, perhaps, more generally of any group linked by reference to a single item.¹⁷ For not all Heraclids have Hercules as their ancestor: the term ‘kinsfolk [*ἀγγειστεῖς*]’ includes relations by marriage (e.g. Elias, *in Isag* 52.2–3).

At *in Cat* 55. 8–9 Porphyry says that ‘ordinary language talks about things which are near to hand [*πρόχειρος*]', whereas philosophers discuss exotic matters and need an exotic jargon. Dexippus, in the same context, says that philosophers, ‘who comment on things unknown to most people’, must either invent new words ‘or else use ordinary language which is near to hand [*τὴν προχειρόω . . . συνηθείᾳ*]’ (*in Cat* 6.10–13); and he means that the words are near to hand inasmuch as they are signs for objects which are near to hand.¹⁸ Thus: origins are nearer to hand, or more readily noticed, than groups; and being near to hand, they got the name ‘genus’ first. Later the term was applied to groups of a certain sort.

In a third sense, a genus is that under which species are ordered. [2.10–14]

The third sense is related to the first two by a ‘similarity’.¹⁹ Genera in the third sense are ‘a sort of origin’ (and hence similar to genera in the second sense) insofar as they pre-exist and produce their species (see 15.16–20);²⁰ and insofar as they ‘contain’ their species (see 7.27–8.3), they are similar to genera in the first sense, which contain their members. Porphyry might also have noted that a genus of the philosophical sort ‘must separate things from other genera’ (Aristotle, *Top* 140a27–28), just as a genus in the first sense marks off one group in contradistinction to others (see 1.22–23; 2.9–10).

¹⁷ Philoponus oddly states that the first two senses are metaphorical and not strict: *in Isag* 202.39–41.—At 2.10 the received text has the past tense, ‘we said [*ἔφαμεν*]’ (which must refer back to 1.20–23). The present tense ‘*φαμέν*’ gives the right sense—found in Arethas’ MS of *Isag* (either a genial correction or a slip of the pen) and accepted by e.g. Tricot, *Isagoge**, p. 14 n. 2. The reverse corruption is found at *ant nymph* 7: ‘*φαμέν*’, MSS, corrected by Nauck to ‘*ἔφαμεν*’.

¹⁸ See also Porphyry, *in Cat* 91.19–24; Simplicius, *in Cat* 79.2–5.

¹⁹ See *in Cat* 65.19; *in Ptol harm* 7.12–15, citing Aristotle, *An* 420b6–7. Ammonius, *in Isag* 71.7–11, posits a ‘similarity’ which links the second sense of ‘species’ to the first.

²⁰ But later, only highest genera are origins: 5.11–12; 6.3–7.

It is genera in the third sense which interest the philosophers. At 2.15–16 Porphyry silently cites Aristotle. Hence it is easy to infer that ‘the philosophers’ of 2.14 are the Peripatetics—a conclusion for which 1.15 has prepared the ground. But Porphyry does not mean that genera in the third sense are the darlings of a particular philosophical coterie; and although the description at 2.15–16 is Aristotelian, Porphyry presents it as a commonplace, not as a school doctrine.

The philosophers ‘delineate [$\dot{\nu}\pi\omega\rho\acute{a}\phi\epsilon\omega$]’ genera. The verb returns at 11.18 (of differences), the noun ‘delineation [$\dot{\nu}\pi\omega\rho\acute{a}\phi\acute{h}\eta$]’ being found at 3.20 (of genera). Elsewhere, Porphyry speaks of definitions ($\ddot{\sigma}\rho\iota\iota$) of species and of property (20.22–21.3);²¹ and the verb [‘define [$\dot{\delta}\rho\acute{h}\zeta\epsilon\omega$]’ makes an appearance at 10.22 and 11.7, each time of differences. At 13.6 the related ‘demarcate [$\dot{\alpha}\phi\omega\rho\acute{h}\zeta\epsilon\omega$]’ is used of all five items (cf. 2.9; 5.17).²² Then again, the commonest verb is the neutral ‘present [$\dot{\alpha}\pi\omega\delta\iota\delta\omega\eta\alpha\iota$]’: 2.15, 24 (but see p. 78 n.76); 4.2 (but see p. 94), 5, 7, 9, 12; 6.24; 11.21 (cf. 1.5, 9.4, 11.12).²³ Perhaps this variety of terms has no significance: at *in Ptol harm* 84.21 ‘ $\dot{\alpha}\phi\omega\rho\acute{h}\zeta\epsilon\omega$ ’ is synonymous with ‘ $\dot{\alpha}\pi\omega\delta\iota\delta\omega\eta\alpha\iota$ ’ at 84.19; and the two verbs introduce the $\ddot{\sigma}\rho\iota\iota$ referred to at 83.16; or again, at 10.30 the verb ‘ $\dot{\nu}\pi\omega\rho\acute{a}\phi\epsilon\omega$ ’ refers to Ptolemy’s characterization of harmonics, which Porphyry takes to be a $\ddot{\sigma}\rho\iota\iota$ (6.31). Elsewhere, too, Porphyry uses ‘ $\dot{\nu}\pi\omega\rho\acute{a}\phi\epsilon\omega$ ’ in a large and neutral sense—‘characterize’ or ‘describe’ (e.g. *abst* II 52; *an fac* 251 = Stobaeus, *ecl* I xl ix 24); and the word is frequently so used by other authors.²⁴ If that is so, then at 2.14 ‘delineate’ means ‘describe’, and the descriptions of genera etc will in fact be definitions (though Porphyry does not always say so).

The commentators take a different line. They suppose that the variety of terms is significant; and in particular, that the term ‘delineate’ has a technical sense in which it contrasts with ‘define’. If they are right,

²¹ At *in Cat* 93.29–30 he offers a $\dot{\nu}\pi\omega\rho\acute{a}\phi\acute{h}\eta$ of properties.

²² For ‘ $\dot{\alpha}\phi\omega\rho\acute{h}\zeta\epsilon\omega$ ’ see e.g. *in Ptol harm* 8.8–9; *in Tim* frag 31 = Proclus, *in Tim* I 257.4, where it means ‘determine’ or ‘describe’, and not ‘define’; cf. e.g. [Galen], *ad Gaur* ii 2, 4; iv 2; Galen, *in Hipp off* XVIIIB 650; Aristotle, *An* 416a20–21. But the word means ‘define’ e.g. at Galen, *PHP* V 243; *san tuend* VI 107; *alim fac* VI 688.

²³ Cf e.g. *in Cat* 63.11, 18, 32; 64.5–7, *et saepe*; *in Ptol harm* 44.20; *in Ptol tetrab* xv [200.7]. The verb and its attendant noun are common from *Cat* onwards (e.g. 1a5; 7a8), and very common in *Top* (see Reinhardt, *Buch E*, pp. 63–66). The use presumably derives from ‘ $\lambda\acute{o}\gamma\omega\dot{\alpha}\pi\omega\delta\iota\delta\omega\eta\alpha\iota$ ’ (e.g. Euripides, *Orestes* 150; cf. Aristotle, *Cat* 1a10–11); although ubiquitous in the Peripatetic tradition, it does not seem to have caught on elsewhere.

²⁴ e.g. Aristotle, *SEL* 181a2; *An* 413a10 (Bonitz, *Index* 795b22–39); Epicurus, *ad Men* 123; 134; Alcinous, *didask* vi [159.39; 160.42]; Sextus, *M VII* 23, 238; Alexander, *in Top* 25.15.

then insofar as the philosophers delineate genera, they do not define them.

The verb ‘ὑπογράφειν’ has its origin in painting: a delineation is a sketch or outline, which will be later worked up and coloured to make a finished painting.²⁵ Hence in its transferred use the verb may mean ‘give an outline account of’; and in that sense, to delineate a term is to describe its meaning in an outline or provisional fashion—in a fashion which falls short of a definition. In his commentary on the *Categories* Porphyry says that a delineation is like a definition (*in Cat* 64.15–17) and that it is a quasi definition (121.24–28—so too Simplicius, *in Cat* 92.10); and the dozen or so occurrences of the word cohere with the notion that delineation contrasts with definition, that ‘delineate’ is used in a narrow and restricting sense rather than in a large and neutral sense.²⁶ In the longer commentary on the *Categories*, Porphyry remarks that a delineation is ‘an account of the substance’ of the thing—that it answers the question: What is it? (*ad Gedal* 51 = Simplicius, *in Cat* 30.13–15). This being so, delineations will be enough to secure Porphyry’s ends in the *Introduction*—for he wants to give us knowledge of what genera and the rest are (1.4–5).

What is the difference between a delineation and a definition? Alexander says that it is *per se* accidents ‘through which are customarily given the accounts of items which are done by delineation’ (*in Met* 176.25–26; cf *in Top* 421.23–32): that is to say, a delineation of something will use predicates which hold of it necessarily but are not part of its definition.²⁷ According to Porphyry,

a definition is an account of the substance insofar as it reveals the substance, a delineation is one insofar as it signifies a property attached to the substance . . . (*ad Gedal* 51 = Simplicius, *in Cat* 30.13–15)

A delineation of X must give a property of X—that is to say, a predicate which holds always of every X and never of anything which is not X.²⁸ Thus ‘being naturally capable of laughter’ is a property of men: all

²⁵ See e.g. Plato, *Plt* 277c for a description of the practice (though the terms are absent); *Rep* 504d (‘ὑπογράφη’ and ‘ἀπεργασία’ used in a transferred sense).

²⁶ See *in Cat* 60.15–16; 72.34–73.3; 87.17–22; 93.28–30; 93.29–31; 111.28; 123.26–31; 125.19–30. The expression ‘delineatory account [λόγος ὑπογραφικός]’ (64.16; 72.35; 73.2, etc) is a synonym for ‘delineation’.—The narrow sense of ‘delineate’ is commonly taken to be Stoic: see Additional Note (A).

²⁷ On *per se* accidents see below, p. 160.

²⁸ So too *in Cat* 87.17–22; 93.28–30; and universally later: e.g. Dexippus, *in Cat* 61.1–12; Simplicius, *in Cat* 29.16–24; 92.4–13; 119.26–30; 159.19–23; Boethius, *in Cat* 166A; *in Isag*² 153.10–154.2 (and also *in Isag*¹ 42.9–44.5: the same distinction, save that

and only men are naturally given to laughter. This property might be a delineation of man; but it is not a definition—for it does not indicate a genus and a difference.²⁹

It might be concluded that the distinction between delineation and definition is of no great philosophical interest, inasmuch as it is tied to the arbitrary stipulation that definitions shall give genus and differences. And this conclusion might seem to aid Porphyry; for the formulae which the *Introduction* offers are intended to say what certain things are, and a formula which says what something is is surely a definition in any reasonable sense of that word.

But the distinction between delineations and definitions need not be tied to the arbitrary stipulation: a delineation of X, we might say, is any formula which gives, informatively, necessary and sufficient conditions for X and yet is not a definition of X. And delineations ought to embarrass Porphyry. First, if

definitions differ from delineations inasmuch as definitions reveal things on the basis of their substance whereas delineations do so on the basis of their accidents (Ammonius, *in Isag* 54.23–55.2)³⁰

then how can a delineation say what something is? Secondly, an appropriate answer to the question ‘What is so-and-so?’ in principle states a genus (or a species) of so-and-so.³¹ Delineations do not specify a genus or a species: how then can they explain what something is?

In any event, why give a delineation of genera rather than a definition? A fragment from Porphyry’s long commentary on the *Categories* explains that there are two types of definition: the conceptual (ἐννοηματικοί) which draw on ‘what is familiar to everyone’, and the substantial (οὐσιωδεῖς); and Porphyry says that the former sort should be used in ‘first introductions’—which is why Aristotle uses them in the *Categories* but not in the *Metaphysics*. (See *ad Gedal* 70 = Simplicius, *in Cat* 213.8–28.) Now delineations are the same things as ‘conceptual

here Boethius speaks of two sorts of definitions rather than of delineations and definitions; he does so because Marius Victorinus had translated ‘ὑπογραφή’ by ‘*definītio*’). See esp the discussion in Ammonius, *in Isag* 54.6–55.7. Note also scholia to Dionysius Thrax, *GG* I iii 115.29–116.12.

²⁹ Above, p. 28.

³⁰ See also *in Isag* 57.14–25, at the beginning of which Ammonius remarks that ‘a delineation is made either on the basis of etymology or on the basis of a concurrence of accidents, the latter being called a delineation in the strict sense’; cf [Philoponus], *in Isag* 11b1–2: ‘a definition depends on essences, a delineation on accidents’.

³¹ See below, pp. 85–92.

definitions';³² and Porphyry's *Introduction* is a 'first introduction'. Hence he had a pedagogical reason for using delineations rather than definitions of genera and the rest.³³

But most of the commentators insist that, according to Porphyry, you cannot give a definition of genera: good pedagogical practice is backed up, in this case, by logical necessity. Why might it be impossible to define genera?

The standard reason for offering a delineation rather than a definition of some item is that the item has no genus; and the standard way of not having a genus is to be a highest genus.

It should also be realized that it is not possible to give accurate definitions of the highest genera; rather, accounts of such items are more like reminders or delineations, and more must not be asked from them than they can supply. Hence for these items it is enough to give some property, from which it is possible to know what they are. (Simplicius, *in Cat* 119.26–30)

Simplicius is stating a commonplace which goes back at least to Boethus (Simplicius, *in Cat* 163.28–29). Porphyry acknowledges it: in discussing the ten Aristotelian types of predication, he asks:

³² See in *Cat* 73.3 ≈ 22 (note also 'ἐννοια' at 88.10—cf 3.20—and 'ἐπίνοια' at 111.18). For conceptual definitions see also Galen, *diff puls* VIII 708; *ars med* I 306; Victorinus, *def* 16.18–17.5 (with Boethius, *in Cic Top* 1098b–1100a; Isidore, *etym* II xxix). Victorinus distinguishes fifteen sorts of definition: the first sort is substantial (*οὐσιώδης* or *substantialis*), and the only one worthy of the name 'definition'. The second sort is conceptual (cf 17.9–18.12; 24.27–25.15) and the fourth is delineatory (*ύπογραφικός*) (cf 19.19–20.21). So some people distinguished conceptual definitions from delineations. But Victorinus' explanations of his different types (on which see P. Hadot, *Victorinus*, pp. 171–174) are scarcely coherent.—Note also in *Ptol harm* 11.19–24: there are three sorts of definition, the *ἐννοητικού*, which give only the form of the item ('which Aristotle calls substantial'), the material ('which the Stoics call substantial'), and the sort which mentions both form and matter.

³³ A delineation may then be regarded as an inferior way of explaining what something is: 'Epicurus constantly uses delineations, which are inferior to definitions' (scholiast to Dionysius Thrax, *GG* I iii 115.29–116.12).—Even where you do offer a definition, it may be useful to add a delineation: 'He [sc. Ptolemy] presented sound as a property of air which is being struck, the primary and most general of audible items, thus demarcating the substance of sound in presenting it as a property of air which is being struck and describing a proper feature of its substance in adding "primary and most general of audible items"' (*in Ptol harm* 8.7–11). For the formula 'ἰδιότητα τῆς οὐσίας' see anon, *in Parm* XI 20 (*ἰδιότης τῆς ὑποστάσεως*); XI 9 (*ἡ τοῦ εἴναι ἰδιότης*).

—What are their definitions?

—It is not possible to present a definition of them since every definition depends on a genus and these items have no genus, being themselves most general.

—Then what can you give?—Examples and properties . . . (*in Cat* 87.16–21)³⁴

The commentators sometimes applied this argument to the term ‘genus’: Boethius urges that since the term ‘genus’ applies to every kind of genus, and in particular to the highest genera, genus itself has no genus (*in Isag*¹ 43.25–44.5). In the second commentary he does not repeat the sophism—instead, he affirms baldly that you cannot give a definition of ‘genus’ because ‘genus cannot have another genus’ (*in Isag*² 180.20–23). Ammonius rehearses and rejects the suggestion—not because he thinks it is false, but because it applies only to genera whereas he wants an argument to show that none of the five items can be defined (*in Isag* 55.8–56.1).

[Elias] suggests that the word ‘genus’—like the four other words—is ambiguous, and that ambiguous terms cannot be defined (*in Isag* xxxi 7–9). He is not thinking of the ambiguities exposed at 1.18–2.13: rather, he thinks that ‘genus’ is ambiguous insofar as it is associated with each of the ten Aristotelian types of predication—as Ammonius says, ‘genus’ does not have the same sense in ‘Substance is a genus’ and ‘Quality is a genus’ (*in Isag* 56.1–11). Porphyry perhaps has this in mind when he says that ‘both species and genera are so called homonymously’ (*in Cat* 91.28–29; cf 61.11–12). But it is not true that ‘genus’ is ten ways ambiguous. Were it true, why not give ten definitions? And if ambiguity excludes definition, surely it also excludes delineation? (Ammonius struggles with this last difficulty: *in Isag* 56.12–57.13.)

Ammonius fishes up a further argument, which he claims to be ‘the most exact reason’ why the five words cannot be defined: definitions reveal the nature of existing things; but genera and species are not things—they are relations among things and as such do not exist. (See

³⁴ Cf *in Cat* 72.34–73.2; 93.28–29; 111.17–18; 121.21–28; see also e.g. Simplicius, *in Cat* 29.16–20; 45.23–24 (but note 46.3–5, where Simplicius offers a genus and difference analysis of Aristotle’s account of what it is to be an accident); 369.23–24 (where offering an example is taken as a way of delineating an item); Boethius, *div* 886A; *in Cat* 166A; 170D.—Boethius notes that, for a parallel reason—lack of specific difference—there can be no definition of individuals; cf (perhaps) Porphyry, *in Cat* 64.9–17; scholia to Dionysius Thrax, *GG* I iii 116.2–5, which state that delineations are only of individuals (also *ibid* 118.26–119.17).

in Isag 76.25–77.5).³⁵ The view that relational items do not exist can be found, for example, in Plotinus:

What are relations but our judgement, when, comparing things which, having being in their own right, actually exist, we say: 'This and this have the same size . . .'? It is we who have thought of right and left—in the objects they are nothing. (*enn* VI i 6.21–35)

And the view occurs in a variety of texts, and may be traced back to Aristotle.³⁶ But it is a queer view; and it provides a poor reason for denying that relational terms can be defined. Nonetheless, the fact that genera are relational terms is not irrelevant to Porphyry's way of characterizing them—to see how this is so, we must wait for his account of species.³⁷

The notion that genera cannot be defined has frail support. Nor did all the ancient commentators hold the five items to be indefinable. Thus Philoponus took Porphyry's accounts of species to be definitions or *δρισμοί* (*in Isag* 203.36–37); David claimed that his account of genera is a perfectly good definition—of the relation of being a genus rather than of any 'thing', as he uneasily puts it (*in Isag* 132.25–28; 142.11–20); and Arethas detected in the account of genus both a genus ('predicate') and differences (all the rest) (*in Isag* 22.5–9).³⁸

These commentators think of themselves as correcting Porphyry: he purports to offer delineations when in fact he offers definitions. It is tempting to draw a different moral. In the *Introduction*, Porphyry uses 'delineate' alongside other rather colourless verbs: he does not hint that he is using the word in a technical sense, nor distinguish between a delineation and a definition. Then why not defy the commentators and suppose that, after all, the *Introduction* uses 'delineate' neutrally to mean 'describe'? This conclusion is attractive; but a later text will show that it cannot stand.³⁹

³⁵ Some urged that since Porphyry has not shown that genera and species exist (he has expressly set the question aside), he cannot properly offer a definition. Delineation, on the other hand, does not imply existence. (See David, *in Isag* 131.1–12; Arethas, *in Isag* 21.6–11.)

³⁶ See *Met* 1088a22–23 (cf. *EN* 1096a20–23—echoed at *in Cat* 142.9–11); also e.g. Diogenes Laertius, IX 97; Sextus, *M* VIII 453 (above, p. 41); IX 352 (on which see Barnes, 'Bits and Pieces'; Baltzly, 'Dogmatists'—who urges that the Stoics denied existence to relational items); and later e.g. Simplicius, *in Cat* 169.1–2; 173.2–3.

³⁷ See below, pp. 95–96.

³⁸ Later, when Arethas considers Porphyry's accounts of species, he urges that two of them are not definitions but that 'the third is strictly a definition—for it contains all the elements of a definition' (*in Isag* 36.1–3).

³⁹ See below, pp. 95–96.

A genus in the pertinent sense is something which is predicated of several items differing in species and which says what they are. [2.15-17]

Aristotle's discussion of genera in *Met* Δ 28 includes the following paragraph:

Next, in the way in which a plane is the genus of plane figures and a solid of solids—for every figure is such-and-such a plane or such-and-such a solid; and this is the subject of the differences. Again, the first item found in the account said in what they are—this is the genus the qualities of which are called differences. (1024a36-b6)

There are links between this text and Porphyry. But Porphyry is not trying to clean up the *Metaphysics*: he is copying down the *Topics*. The account of genera at 2.15-17 is found, word for word, at *Top* 102a31-32, a passage which Dexippus cites as 'Aristotle's definition' (*in Cat* 14.32-34).⁴⁰ Porphyry gives the same account at *in Cat* 82.5-10, again without mentioning Aristotle. The formula is frequent in Alexander;⁴¹ it is alluded to by Plotinus (*enn* VI i 25.20-21); and in later texts it is the standard account of genera. Thus:

A genus is what is predicated, in answer to the question 'What is it?', of several items which differ in species—as is said first by Aristotle in the *Topics* and then by Porphyry the Phoenician (who took it from him) in the *Introduction* and elsewhere. (*Trophonius, proleg* 12.5-8)⁴²

Porphyry reasonably ascribes the account to 'the philosophers'.

For species and differences Porphyry will produce several accounts. For genera he gives only one.⁴³ Something a little different is found in the rhetorical tradition—for example:

A genus is something which embraces two or more parts, similar by a certain commonality but different in species; parts are what are subordinate to the genera from which they derive. (Cicero, *de orat* I xlii 189; cf e.g. *inv* I xxii 32; xxviii 42)

⁴⁰ Aristotle does not himself call it a definition—nor a delineation either; Alexander, *in Top* 47.5, refers to it as a definition, without comment.

⁴¹ e.g. *in Top* 38.272-30; 323.22-23; 364.26-28; *in Met* 428.29-30; 429.10-12; *quaest i 11* [21.27-28; 22.15-16]; *in Cat* (Schmidt, 'Alexander', p. 281).

⁴² Cf e.g. Simplicius, *in Cat* 54.25-28; 298.33-35; [Sergius], in Furlani, 'Sergio', pp. 37, 42; scholia to Dionysius Thrax, *GG* I iii 117.1-6 (below, p. 86); a Latin version in Boethius, *in Cat* 177b; *div* 880a; *in Cic Top* 1064p.

⁴³ The formula at 2.11 ('that under which a species is ordered') is not presented as coming from the Old Masters: see below, p. 98.

And among the grammarians:

A general name is one which can be divided into several species, e.g. animal, plant. A special name is one which is divided from a genus, e.g. ox, horse, vine, olive-tree. (Dionysius Thrax, 12 [43.1–44.1])

But perhaps these formulas were regarded as debased or abbreviated versions of the standard account.

Diogenes Laertius gives a Stoic definition of genera:

A genus is a collecting [σύλληψις] of several undetachable thoughts [ἀναφαιρέτων ἐννοημάτων], e.g. animal—for animal contains the particular animals. (VII 60)⁴⁴

The definition is faintly echoed in a few other texts. Perhaps Porphyry ignored it because of its metaphysical *parti pris*; for—if we take seriously the reference to thoughts—it determines an answer to a question which Porphyry decided to leave aside.⁴⁵

The standard account of genera raises several questions. Why, for example, must every genus contain a plurality of items? Why may a genus not have a single member? or no members at all? Well, every genus divides into several species (see 7.1–2) and every species contains a plurality of members (2.25): hence every genus contains a plurality of members. Then why think that every genus divides into a plurality of species?⁴⁶ Well, that is a matter of stipulation—that is how the term ‘genus’ is to be employed. (It is another question whether the stipulation is fruitful.) And why think that every species contains a plurality of members? Why should there not be species which have a single member (the phoenix, say) or no members at all (the goat-stag)? This question must be postponed until we meet Porphyry’s account of species.⁴⁷

⁴⁴ Cf Cicero, *Top* vii 31 (ascribed to ‘the Greeks’): ‘A genus is a concept [*notio*] belonging to several differences, e.g. animal.’ Cf Themistius, *in An* 3.32 (‘a genus is a thought’); Martianus Capella, IV 344; V 476; Boethius, *in Isag*² 166.18 (with a parallel account of species at 166.15–17). At *in Cic Top* 1104E Boethius cites Cicero, repeats the Porphyrean account of genera from 1064D, and affirms that the two accounts are equivalent.

⁴⁵ Above, pp. 37–49.

⁴⁶ Note an ancient puzzle over the last six of Aristotle’s types of predication: the predications were universally taken to be genera (below, pp. 124–125); and yet the last six seem to have no species under them. Simplicius replies that the six do in fact have species—although he allows that ‘someone might say’ that they are not genera in the strict sense (*in Cat* 298.27–38).

⁴⁷ See below, pp. 100–104.

Again, what items answer the question ‘What is it?’? The Greek phrase translated as ‘. . . predicated in answer to “What is it?”’ is an Aristotelian formula which Porphyry does not stop to explain. It is often Englished as ‘. . . predicated in what it is’—if that formula may be called English. Better, ‘. . . predicated in “What is it?”’—to which babu version my translation purports to be an English equivalent. Aristotle offers a gloss:

A genus is what is predicated, in answer to ‘What is it?’, of several items which differ in species. Let things be said to be predicated in answer to ‘What is it?’ if it is appropriate to present them when asked what the item before us is—e.g. in the case of man it is appropriate, when asked what the item in question is, to say that it is an animal. (*Top* 102a31–35)

Thus in ‘X is predicated of Y in answer to “What is it?”’, the ‘it’ refers to Y; and X is predicated of Y in answer to the question ‘What is Y?’, if ‘Y is X’ is an appropriate answer to ‘What is Y?’. (‘An appropriate answer’, not ‘the appropriate answer’; for such questions admit several appropriate answers.)

When is such an answer appropriate or correct? What exactly is the question ‘What is Y?’ after? It is later contrasted with two other questions: ‘What sort of so-and-so is Y?’ and ‘What is Y like?’ (3.9–10, 18–19); and the three questions are best discussed together.⁴⁸

The most urgent question raised by the standard account of genera is this: what does it mean to say that a genus is something predicated? This innocent question hides a number of issues which may as well be discussed here.

All the five items are predicated items (2.17–20), differing from one another in their manner or mode of predication. They are also all relational items, in the following sense: an item is not a genus etc *simpliciter*; it is a genus etc of something.⁴⁹ This is evident in the case, say, of properties: it makes no sense to say, nakedly, that whiteness is a property—

Whiteness is a property

either is short for ‘Whiteness is a property of something or other’ or else means nothing at all. The point is less evident in the case of genera. But it holds equally of all five items.

⁴⁸ See below, pp. 85–92.

⁴⁹ ‘. . . both the general term “Predicable”, and each of the classes of Predicables, (*viz.* Genus, Species, &c) are *relative*; *i.e.* we cannot say *what* *predicable* any term is, or whether it is any at all, unless it be specified of *what* it is to be predicated’ (Whately, *Logic*, II v 4).

The five items are predicated items: that is to say, they are predicated of a subject. If X is a genus, then X is predicated of some subject or other; and if X is a genus of Y, then X is predicated as a genus of Y.⁵⁰ Similarly for the other four items. Hence the five items may be represented by way of particular determinations of the following general formula:

X is predicated in manner M of Y.

For example,

X is predicated as a genus of Y.

Here the expression ‘as a genus’ is an adverbial modification of the verb ‘is predicated’; and this point stands out if we replace it by a simple adverb:

X is predicated generally of Y.

In what follows I shall frequently use this formula and its colleagues:

X is predicated specially of Y.

X is predicated differentially of Y.

X is predicated properly of Y.

X is predicated accidentally of Y.

The relational nature of the five items suggests that an item might be, say, a genus of one thing and an accident of another, that X might be predicated in one manner of one thing and in another of another. This is not an empty speculation. Plotinus notes that

the same item is both a difference which completes <a substance> and, in something else, not a difference (inasmuch as it does not complete the substance) but an accident. For example, white in swans, or in white lead, completes: in you it is an accident. (*enn* II vi 1.18–22)

White is predicated differentially of swans and accidentally of Socrates. Porphyry does not allude to such possibilities in the *Introduction*; but nothing he says outlaws them.

The five items are predicates, or modes of predication. Then what is predication? A first answer might start from the following Aristotelian idea:

⁵⁰ For this turn of expression see 3.16–17; 14.3–8 (with notes); *in Cat* 75.18. For Aristotle's use of similar turns see Slomkowski, *Topics*, pp. 81–88.

You predicate something of something insofar as you say of such-and-such that it is so-and-so.

For example, if you produce (in a suitable way) the sentence

Socrates is a fool,

then you say of Socrates that he is a fool. Hence you predicate something (being a fool, or folly, or the word 'fool', or . . .) of something (of Socrates, or of the name 'Socrates', or . . .). And if you produce (in a suitable way) the sentence

Horses are reptiles,

then you say of horses that they are reptiles; and so, again, you predicate something of something.

But this is not what Porphyry means. First, X may be predicated of Y—according to the pertinent usage—even if no-one has ever been minded to say anything on the subject. Secondly, X is predicated of Y—according to the pertinent usage—only if X holds of Y or is true of Y.⁵¹ In short, X is predicated of Y if and only if X is true of Y.

What sort of item is Y? If Socrates is wise, is something predicated of Socrates (the philosopher) or of 'Socrates' (the name) or of some other Socratic item? Surely, of the philosopher. Genera, according to the standard account, are predicated of items which differ in species; and it is individual objects, Socrates and Bucephalus, not the names 'Socrates' and 'Bucephalus', which differ in species. Again, a predicate is predicated of a subject; the subject of a sentence is what the sentence is about; and

Socrates is wise

is about Socrates (and not about the name 'Socrates'). The Greek term for 'subject' ('ὑπόκείμενον', the constant partner of 'κατηγορούμενον') usually designates not an expression but what an expression designates.⁵² Explicit statements on the matter are rare—no doubt because it was too evident to need statement. But here is Macrobius:

⁵¹ 'τὸ A κατηγορεῖται τοῦ B' is equivalent to 'τὸ A ὑπάρχει τῷ B'—as it often is in Aristotle.

⁵² So, clearly, in the grammarians: see Lallot, 'Apollonius', pp. 36–38.—The Greek grammarians do not make technical use of the categories of subject and predicate. Lallot thinks, pp. 46–47, that they thereby 'lost a treasure'. Rather, they realized that the Aristotelian distinction had nothing to do with their grammatical interests.

A subject is a primary substance . . . e.g. Cicero—not the name but what is signified by the name. (IV 361)

The issue seems plain; but before closing it, let us look at the parallel question about predicates.

If X is predicated of Y, what sort of an item is X? If the sentence Socrates is wise

predicates something of Socrates, what does it predicate of him? An entity: wisdom, or being wise, etc? an expression: ‘wise’, ‘is wise’, etc? something which is neither an entity nor an expression?⁵³ Porphyry does not address the question in the *Introduction*; but there is a hint in his text.

At 2.18 he gives three illustrative examples of items which are predicated of one thing only. Two of these are written in the Greek as ‘τὸ οὐτός’ and ‘τὸ τοῦτο’. The neuter singular of the definite article is used here to construct a name for an expression: it functions in much the same way as inverted commas often function in contemporary written English; so that ‘τὸ οὐτός’ means “οὐτός”—as though we were to say ‘the this’ for ‘“this”’. Elsewhere Porphyry draws attention to this common Greek convention (in *Cat* 62.1–4), and he is surely making self-conscious use of it at 2.18: the passage shows that, sometimes at least, predicates are expressions.

No other text in the *Introduction* provides an unambiguous occurrence of this use of the definite article; but there are several passages which might reasonably be construed in that sense. Thus at 2.17 the expression ‘τὸ ζῷον’ presents an example of a genus. The Greek is ambiguous since the word ‘ζῷον’ is neuter in gender: the phrase might mean either ‘the animal’ (or better, ‘animals’) or else ‘“animal”’. But 2.18 encourages the latter translation. And so often elsewhere.

The third example at 2.18 is written as ‘Σωκράτης’—no definite article.⁵⁴ But the expression is surely intended to designate the name ‘Socrates’ rather than the man Socrates.⁵⁵ That is to say, it is to be

⁵³ The Stoics say that predicates or *κατηγορήματα* are *λεκτά*—neither expressions nor the items designated by expressions, but something betwixt and between (e.g. Diogenes Laertius, VII 64).

⁵⁴ David perhaps read ‘τὸ’ in front of ‘Σωκράτης’: in *Isag* 133.20.

⁵⁵ But the correct translation is ‘Socrates’, not ‘“Socrates”’. Translators and editors are generally and pardonably lax in such matters; but sometimes laxity turns into error: e.g. de Libera falsely gives the first two examples at 2.18 as ‘cet homme-ci’ and ‘cette chose-ci’; and in his edition of Boethius’ translation, Minio-Paluello puts inverted commas around ‘animal’ in 2.17 but not around ‘hic’ and ‘hoc’ in 18.

understood ‘autonymously’, as naming itself. Autonymy irritates pedantic logicians; but it is and always has been the commonest way for non-pedants to refer to words and expressions. And in the *Introduction* autonomy is always an available construal.⁵⁶

Thus Porphyry’s fashion of designating predicates requires twice that they be construed as expressions; and it is always compatible with such a construal. And this suggests that, in Porphyry’s eyes, predicates are expressions.

But the nature of predicates was a matter of ancient debate. It was debated under the rubric: What sort of item are Aristotle’s predication? The term ‘predicate’ was a term of art, and at bottom a term of Aristotelian art: its sense would therefore be controlled by the interpretation of Aristotelian texts—and in particular of the *Categories*. The late commentators rehearse three simple answers to the question ‘What is a predicate?’: a predicate is an expression; a predicate is a concept; a predicate is an object.⁵⁷ All three answers are then rejected in favour of a composite reply: Predicates are expressions insofar as they designate objects by way of concepts.⁵⁸

The composite reply was usually ascribed to Porphyry (e.g. Simplicius, *in Cat* 10.20–23); and indeed Porphyry says that

Aristotle took the word predicate [*κατηγορία*], which was used in ordinary language of courtroom prosecutions, . . . and adapted it to the application of meaningful expressions [*λέξεις*] to things. Hence every simple meaningful expression, when it is applied to or said of the meant thing, is called a predicate [*κατηγορία*]. For example, this stone, to which we point and which we touch and see, is a thing; and when we say of it that this is a stone, the expression stone is a predicate [*κατηγόρημα*]; for it means a thing of this sort, and it is applied to the thing to which we point. And so in other cases. (*in Cat* 56.5–13)⁵⁹

When Aristotle speaks of predicates he means to speak of words—after all, at *Cat* 1b25 he says that predicates ‘mean [*σημαίνειν*] things, and it is expressions which mean things (see *in Cat* 56.34–57.12; 86.35–37). The thesis that predicates are expressions was also affirmed in Porphyry’s longer commentary:

⁵⁶ More on all this in Additional Note (C).

⁵⁷ Or better—since words are objects (and so too, on the ancient understanding of the matter, are concepts): Is what is predicated of a subject an expression, or the concept which that expression expresses, or the object for which that expression stands?

⁵⁸ For the debate see esp Simplicius, *in Cat* 9.4–13.26; cf Hoffmann, ‘Catégories’.

⁵⁹ At *in Cat* 56.11–12 Ebbesen, ‘Boethius as a scholar’, p. 379 n. 25, proposes (on the basis of Simplicius, *in Cat* 11.2–3 and 17.5–7): ἡ λίθος λέξις <*κατηγορία*> ἔστι, τὸ δὲ πρᾶγμα <*κατηγόρημα*> ἔστιν. At 56.13 I delete ‘λίθον’.

the division into predication is made insofar as the expressions have a relation to entities, meaning them. (*ad Gedal* 47 = Simplicius, *in Cat* 11.23–29)⁶⁰

He ascribes the thesis to Boethus and to Herminus, distinguishing it from two other views: the view which takes predicates for objects or entities (the view of Plotinus among others, though Porphyry names no names), and the view which takes them as expressions (which he attributes to the Stoics Athenodorus and Cornutus). So *in Cat* 59.10–33.

Predicates are expressions insofar as they are meaningful (not, say, insofar as they have a certain syntactic function or a certain morphology). That is to say, predicates are identified and classified according to the semantic properties of the expressions with which they are identified. ‘For being predicated is a property of words which mean thoughts and things’ (Dexippus, *in Cat* 10.25–32). The late commentators are wrong in thinking that this is a combination of their three simple views: it is the first of the three, construed in a particular way.

Contemporary interpreters generally reject Porphyry’s account of Aristotle, taking his predicates to be objects rather than expressions; and there are texts which sustain the interpretation (e.g. *Int* 17a38–39). But in truth Aristotle oscillates from one position to another.⁶¹ In any event, Porphyrean predicates are, officially, words or expressions.⁶²

⁶⁰ So too Dexippus, *in Cat* 10.19–32. And at 6.23–26 he writes, of the title of *Cat*, that ‘the title *Predication* shows that genera and species and all universals are predicated of the entities which are underneath them, and that common meaningful expressions are predicated of all the particular expressions subordinate to them’.

⁶¹ ‘Aristotle is notoriously lax about anything like the use/mention distinction. Thus he rather freely shifts back and forth between ontological predication and mere linguistic predication . . . While this is unfortunate and no doubt untidy, for the most part it does not cause any real problems’ (Mann, *Discovery*, p. 24). Laxity about the use/mention distinction is universal and unmisleading; but oscillation between ‘ontological’ and ‘linguistic’ predication is worse than untidy.—Many of the commentators oscillate in time with Aristotle. Thus Boethius will say, on the one hand, that ‘a simple proposition is one which consists of two terms: terms are the names and verbs which we predicate in a simple proposition, e.g. in ‘*Socrates disputat*’ ‘*Socrates*’ and ‘*disputat*’ are the terms’ (*in Int*² 77.5–15). And on the other hand: ‘Every verb means those items which are predicated of something else—e.g. the verb ‘*currit*’ means a certain sort of item which is predicated of something else, i.e. of a running item.’ (*ibid* 67.18–21; cf. 73.25–30). And the oscillation is no doubt responsible for such things as this: ‘Every thing [*res*] is the name either of one thing or of several’ (*in Isag*¹ 44.17–18). Another muddler: ‘We divide a species into individuals as when I say: “Of men, one is Plato, another Socrates, another Alcibiades”. For man is a species and the names [*τὰ ὄνόματα*] are individuals’ ([Elias], *in Isag* xx.3).

⁶² In other texts, what is predicated of a subject is frequently said or implied to be an expression: see e.g. [Galen], *ad Gaur* i 2; xiii 1 (*κατηγορεῖν τὸ δυνάμει*); Alexander, *in Met* 8.11 (*we predicate the name of wisdom of those who know things*); 115.3 (*κατηγορούμενον τὸ μονάς*); 126.7–8 (*τὸ γάρ οὐ τρέχει . . . κατηγορέται*); 276.16–18 (the *ὄνόματα ἀνθρωπος* and *οὐκ ἀνθρωπος* are predicated); *in APr* 181.21

Subjects, on the other hand, were provisionally taken to be objects. Hence if

Socrates is wise

is a predicative sentence, then it predicates a linguistic expression of a Greek philosopher. But in Aristotelian syllogistic, predicates and subjects are homogeneous in the following way: any item which may be a subject may be a predicate, and any item which may be a predicate may be a subject. (The homogeneity is reflected in the principles of conversion: for example, if X is predicated of no Y, then Y is predicated of no X; and if X is predicated of some Y, then Y is predicated of some X.⁶³) Hence if predicates are expressions, then so too are subjects.

The view that the subject of a proposition is an expression is found, for example, in Apuleius, where the noun ‘*Apuleius*’ is the subject and the verb ‘*dissert*’ is the predicate of the sentence ‘*Apuleius dissert*’ (*int* iv [192.6–9]); and in Galen (e.g. *inst log* ii 2–3); and in Alexander (e.g. *in APr* 14.28–15.4; 16.12–13). It sometimes slips into Aristotle (e.g. *Int* 19b37–38, with b32). It became a commonplace:

Of propositions, some are constructed from just two simple words conjoined, one subject and the other predicate, as when I say Socrates walks. For here ‘Socrates’ is called subject term and ‘walks’ predicate term—because in every predicative sentence there is that about which the sentence is and that which is said about it; and that about which the sentence is—like ‘Socrates’ here—is called subject, as receiving its predication, while that which is said about it—like ‘walks’ here—is called predicate, as being affirmed and said of it. (Ammonius, *in Int* 7.30–8.4)⁶⁴

The commentators read the view into Porphyry (e.g. Elias, *in Isag* 48.33–49.1); and they are presumably right.

(τὸ οὐτὸς κατηγορηθῆσεται); Boethius, *in Int*² 115.20–21 (in ‘*Plato disputat*’ ‘you predicate *disputat* of a certain [quidam] Plato’); 118.7–9; and for Aristotle, *Top* 133a15–23 (note ‘τὸ ἀνθρωπὸς’ at 16 and 21); 134b34–36 (an ὄνομα is predicated).

⁶³ Aristotle, *APr* 25a14–26; Alexander, *in APr* 31.1–35.8. On the homogeneity see e.g. Barnes, ‘Grammar’.

⁶⁴ Cf e.g. *ibid* 79.4–9; *in Cat* 11.3–4; but note the following remark: ‘Being predicated and being subject for a predication apply not to objects [πράγματα] but primarily to thoughts [νοήματα] and because of them to words [φωναί].’ (*in Int* 21.21–23). Also e.g. Martianus Capella, IV 393; Boethius, *in Int*² 255.27–28. The grammarians sometimes talk of predication of items of expressions (e.g. Apollonius, *adv* 120.4–14); but they have a relaxed sense for ‘predicate’ (Lallot, ‘Apollonius’, pp. 38–40).—Porphyry once remarks that ‘what is predicated is predicated either of a name or of a case’ (*in Int* 84 = Ammonius, *in Int* 44.19–20)—but this is part of his account of Stoic views on predication.

If the subject of a sentence is what the sentence is about and if the subject of a sentence is an expression, then all we ever talk about are expressions. That is no doubt absurd. Evidently, if the subject of a sentence is an expression, then the sentence is not about its subject but about what its subject designates. The subject of

No men are wise

is the word ‘men’; but the sentence is about men. This is not what Ammonius and his fellows say; but it is what they ought to have said.

If predicates (and hence subjects) are expressions, what sort of expressions are they? Dexippus reports that the question was controversial (*in Cat* 13.1) and devotes a long discussion to it (11.1–16.13). The upshot is this:

Those parts of meaningful language which, when placed in a simple predicative proposition, form in the proper sense the terms of which it is composed—those are the items attached to the predication. (12.29–31)

That is to say, an expression is a predicate if and only if it can play the role of X or Y in a sentence which predicates X of Y. Not very illuminating—save that Dexippus speaks of simple predicative propositions, thereby suggesting that there are also complex predicative sentences the terms of which are not pertinent to Aristotle’s theory of predication.

The idea is in Porphyry, who says that every ‘simple meaningful expression [$\lambdaέξις$]’ is a predicate.⁶⁵ Thus in the *Categories*

it is Aristotle’s intention to discuss the primary expressions which are indicative of primary and simple objects.⁶⁶

By ‘simple [$\alphaπλοῦς$] expression’ here he does not mean ‘unambiguous’ (as at 1.18). Thus he contrasts simple expressions with expressions used ‘in accordance with an interweaving [$κατὰ συμπλοκήν$]’, adding that there are two varieties of interweaving: one, when two words are joined

⁶⁵ See *in Cat* 56.8; 58.5.—But note that such simple expressions as ‘noun’ and ‘verb’ are excluded (58.32–37): they belong to what Porphyry calls the ‘second imposition’ of words (that is to say, they are expressions which signify linguistic items), and Aristotle is talking of words of the ‘first imposition’ (that is to say, words which signify things). The distinction between the two impositions is celebrated. It is also unsatisfactory. And Porphyry’s thesis has some odd consequences—e.g. that the sentence ‘No noun is a verb’ is not a (simple) predicative sentence.

⁶⁶ *ad Gedal* 50 = Simplicius, *in Cat* 21.7–9; cf. 46 = *ibid* 10.20–23. According to Simplicius, ‘that Aristotle is here discussing simple items . . . is evident’—the question is only: what sort of simple item? (*ibid* 9.6–7; cf. 294.10–12; 314.1–5).

by a conjunctive connector (for example, 'Socrates and Plato'), and the other when words are put together into a sentence (*in Cat* 70.31-71.15).

The second form of interweaving is not relevant. The first sort makes 'pale and musical' complex but leaves 'pale man' simple—but Porphyry certainly regarded 'pale man' as a complex predicate. The several ancient discussions of predicative simplicity do not yield any unique and coherent doctrine.⁶⁷ But something like the following account corresponds roughly to their general tenor:

- (i) A predicate is simple if and only if it is not compound.
- (ii) A predicate is compound if and only if it contains, as a proper part, an expression which is itself predicated of the subject.

Thus 'old and grey', 'white man', 'two feet long', 'slow worker', etc will all count as compound predicates. And compound predicates are not predicates—or rather, they are not distributed among the ten Aristotelian types of predication.

Is this pertinent to the *Introduction*? Why not take Porphyry to be talking about predicates in general, whether simple or compound? Well, Porphyry's conception of predication was determined by his understanding of Aristotle's *Categories*; and the items which are pertinent to his pentad all belong to one or other of the ten types of predication which Aristotle there classifies. The same, after all, was true of Aristotle's tetrad:

Now we must determine the genera of predication in which the four we have described are found. They are ten in number . . . (*Top* 103b20-21)

The four predicables are found in the ten genera of predication; that is to say, anything which is predicated generally etc of an item is predicated of it as substance or as quality etc. Now if we ask to what type of predication 'old and grey' or 'white man' or 'slow worker' belongs, there comes no answer: such items—and in general, compound terms—have parts which belong to one genus of predicate or another, but they do not themselves belong to any genus. Hence anything predicated generally etc of an item must be a simple predicate. The expression 'tedious old man' belongs to no Aristotelian type of predicate. It is no doubt true of several items. But it predicated of them neither generally nor specially nor differentially nor properly nor accidentally.

⁶⁷ Some discussion in Additional Note (D).

Three further questions may be briefly addressed. First, consider the sentences:

- (1) Horses gallop
- (2) Horses are herbivores.

Each predicates X of Y, and in each (let it be granted) X and Y are simple. What are the predicates in (1) and (2)? In (1), surely the verb, 'gallop'? Hence in (2), the verbal phrase 'are herbivores'. Thus in the sentence 'The man is just',

'is' has been added <to the terms>, binding them together (as I have already said) and being additionally predicated of the subject—of which we say the whole phrase, namely that it is just. (Ammonius, *in Int* 165.14–16)

But although Ammonius takes 'is just' to be a predicate, it is a compound predicate: 'just' is also predicated in the sentence.

And 'just' is the predicate which counts. So in (2), 'herbivores'—not 'are herbivores'—is the predicate. Hence the predicate in (1) is not 'gallop' but rather something like 'gallopers'; for (1) is synonymous with

- (1a) Horses are gallopers.⁶⁸

The homogeneity of subject and predicate requires this interpretation: the verb 'gallop' cannot appear in subject position, the word 'gallopers' can.

It may be objected to this that the ancient texts frequently say that, in the simplest sort of sentence, it is the verb—so 'gallop'—which is the predicate. They do. They are careless.

It may be objected that the expression 'gallopers' does not appear in (1) and therefore cannot be its predicate. But, as Alexander insists, we should distinguish between the 'setting out [$\epsilon\kappa\theta\epsilon\sigma\iota\varsigma$]' or identification of the terms in a predicative sentence and the form in which the terms manifest themselves in the sentence. A sentence may predicate X of Y even though neither X nor Y appears in it. (See Alexander's extended commentary on *APr A* 36: *in APr* 359.18–366.12.⁶⁹)

Secondly, whether predicates are taken as expressions or concepts or objects, the Aristotelian conception of predication is sometimes alleged to be a muddle. For the Aristotelians find predication both in

⁶⁸ See Aristotle, *Int* 20a3–6; 21b9–10; *Met* 1017a27–30.

⁶⁹ In fact, the predicate in (1) is generally identified as 'galloper'—which does not even appear in (1a).—Note that even if you take the verb in (1) as the predicate, you will identify it as the infinitive 'to gallop' (which does not appear in (1)) rather than as the indicative 'gallop' (e.g. *in Cat* 80.6–8; Galen, *inst log* ii 2).

(1) Socrates is a man

and in

(2) All men are animals.

In (1), something is predicated of Socrates (or of ‘Socrates’), and in (2) something is predicated of men (or of ‘men’).⁷⁰ And there is predication too in the sentence

(3) That man is Socrates.

Now the logical structures of these three sentences are entirely different, and the verb ‘be’ serves different functions in them. Sentence (1) says something of an individual, and it is true if and only if the individual falls under the predicate or is a member of the class of objects determined by the predicate. (2) says something about the relation between two concepts or between two classes, namely that the one falls within or is included in the other. And (3) expresses a relation of identity. If you conflate the three structures, or three uses of ‘be’, you are lost.

Did the Peripatetics conflate the three? Well, Aristotle—like Plato before him—has a certain amount to say about sameness or identity; and he is aware that identity sentences constitute a special class and raise special questions; so he does not take (3) to be on all fours with (1). As for the distinction between (1) and (2), the Peripatetics differentiate between singular terms and common terms;⁷¹ they separate singular from general propositions; and they acknowledge that it is one thing to divide a genus into species and another to divide a species into individuals. True, Peripatetic syllogistic has no use for a distinction between singular and general propositions and no special place for identity propositions. But contemporary logic has no use for the distinction between common nouns and adjectives. It is one thing to make no place for a distinction inside a logical system, another to fall into the mire.

Nonetheless, the Peripatetics suppose that sentences (1)–(3) have a certain structure in common. Is there such a structure? In other words, can the Peripatetics give a coherent explanation of predication—something of the form:

⁷⁰ ‘A Species . . . , when predicated of Individuals, stands in the same relation to *them*, as the Genus to the Species’ (Whately, *Logic*, II v 4).

⁷¹ See below, pp. 78–80.

A sentence of the form ‘X is predicated of Y’ is true if and only if P? The question is intricate;⁷² and it is complicated by the fact that the sentence

No horses are reptiles

predicates ‘reptile’ of ‘horse’—and does so truly. That is to say, the schema to be elucidated is something like:

X is predicated of Y in quantity Q.

But the *Introduction* may get by on something simpler: let us say that a sentence of the form ‘X is predicated of Y’ is true if and only if X is true of whatever Y is true of.

And X is true of an item if and only if when X is the expression ‘Socrates’ the item in question is Socrates, when X is the expression ‘man’ the item is a man, and so on.

The third question is this. In the commentary on the *Categories* Porphyry says that

existing items [$\tau\alpha\ \circ\nu\tau\alpha$], their genera, their species and their differences are things and not words. (*in Cat* 56.34–35)

Dexippus echoes him: ‘the predicates are words, the genera are natures’ (*in Cat* 14.27). And the view seems plausible: the predicate ‘cactus’ is to be found in the *OED*; to find the cactus itself you must go into the desert. But in the *Introduction* Porphyry contradicts this plausible view; for the description of genera makes predicates of them, and predicates are expressions. The genus cactus is the predicate ‘cactus’—and there is no use looking for that in Arizona. Worse, insofar as Porphyry takes genera and species to be expressions, he answers the ontological question which he promised to leave aside. For the thesis that genera are expressions commits him to some sort of ‘nominalism’. And to a queer view about the birds and the bees.⁷³

⁷² See e.g. Barnes, ‘Grammar’; Mignucci, ‘Predication’.

⁷³ ‘The *Introduction* does not offer an answer to Porphyry’s problem [sc about the status of genera and species]; but Porphyry’s interpretation of the *Categories* clearly indicates what position would have been his had he offered an answer: a sort of nominalism or “vocalism”’ (de Libera, *Isagoge**, p. XLIII). A footnote replaces ‘nominalism’ by ‘conceptualism’ and remarks that ‘it remains to reconcile this conceptualism with the thesis . . . that beings, their genera, their species and their differences are $\pi\rho\alpha\gamma\mu\alpha\tau\alpha$ ’ (*ibid*, p. XLIV n. 61).

Porphyry is inconsistent; but the inconsistency is readily side-stepped. In the *Introduction* we are to learn what a genus is; that is to say, we are to learn what it is for something to be predicated as a genus, or to be predicated generally. So take a predicate, X, and suppose that its sense is given by the formula:

X is true of an item if and only if that item is an F.

Then consider the following sequence of definitions:

- (D1) Fs are a genus if and only if X is a general term.
- (D2) X is a general term if and only if, for some Y, X is predicated generally of Y.
- (D3) X is predicated generally of Y if and only if (i) 'Y is X' answers the question 'What is Y?' and (ii) there is at least one term Z which is true of items specifically different from items of which Y is true and is such that 'Z is X' answers the question 'What is Z?'.⁷⁴
- (D3) is a version of the standard account of genera. (D1) and (D2) make the link between general predication and genera—and do so without insinuating any metaphysical theses.

Genera are thus distinct from other predicates—and first from those which are predicated of only one item.

[2.17-24]

The standard account of genera requires some elucidation. Porphyry elucidates it indirectly in the remaining paragraphs of § 1. Formally speaking, the paragraphs offer a justification of the account ('for': 2.17) by showing that it distinguishes genera from other predicates (3.19-20).⁷⁵ The justification invokes five other types of predicate, which Porphyry names and exemplifies at 2.17-22⁷⁶ and which—so it is

⁷⁴ In what follows, the letters 'X', 'Y', 'Z', etc (sometimes with superscripts or subscripts) are in principle variables which range over names for terms. But sometimes they function as dummy letters (for names of terms); and occasionally they are used even more sloppily (e.g. in 'What is X?', or in '... is true of Y'). The sloppiness is less irritating, and no more distracting, than the pedantry which is needed to avoid it.

⁷⁵ Cf Alexander, in *Top* 44.7-25, explaining how Aristotle's account of genera distinguishes them from the other three Aristotelian predicables.

⁷⁶ There is something odd about the examples of accidents: you might expect either two or four illustrations—add 'standing' before 'sitting', with one MS, or else omit 'white', with another? ('Pale' and 'dark' are usually better translations of the Greek than 'white' and 'black' (see e.g. in *Cat* 131.6-7)—save that the Greek words are names for

usually supposed—he takes to constitute, together with genera, an exhaustive division of predicates.⁷⁷ Four of the five types are the other members of the Porphyrean pentad, which are thus put to work before they have been formally presented. Porphyry might better have placed the justification at the end of the first half of the *Introduction*. (There are no parallel justifications for the accounts of the other four items.)

First, the account distinguishes genera from individuals.⁷⁸ Porphyry's favourite term for such items is 'ἄτομον': 'unsplittable', 'atomic'⁷⁹—here at 2.18, and thirty-odd times hereafter. Cicero translated it by 'individuum' (*fin* I vi 17), and I adopt 'individual'. Porphyry also uses 'κατὰ μέρος' or 'particular' (3.4, and a dozen times more); and 'καθ' ἔκαστον' or 'singular' (6.20, 22). The commentary on the *Categories* adds 'ἐπὶ μέρους' and 'μερικόν' (e.g. in *Cat* 73.13; 71.29–38). Two of these terms are common in Aristotle; all of them are current before Porphyry.⁸⁰ They have different etymologies, and there are different reasons why they come to denote individuals. Some scholars suppose that they are also different in meaning.⁸¹ But no Porphyrean passage imposes or implies any difference of sense.

Some items are predicated of a single subject, others of a plurality: a predicate is individual if and only if it holds of exactly one item; or better: X is predicated individually of Y if and only if X is true of exactly

colours.)—In *Isag* Porphyry uses some fifty illustrative examples for his five items. Half are in Aristotle's *Topics*; a dozen or more in Alexander, *in Top*; and the others were doubtless stock illustrations. In ancient as in modern logic texts, examples were usually old and tired (with a few self-referential exceptions: e.g. Apuleius, *int* iv [192.7–15]; Alexander, *in Apr* 176.4–5). 'In this book . . . where it was necessary to use examples, we have used examples of our own, and we have done this contrary to the custom of the Greeks' ([Cicero], *ad Her* IV i 1).—2.20–22, which contains the examples, is expunged by de Libera, *Isagoge**, p. 42, n. 26, for no good reason—cf Aristotle, *Cat* 1b25–2a4 with *in Cat* 86.15–18.—At 2.24 the participle 'ἀποδοθέντα' will not construe. It might be changed to an infinitive ('because they have been presented as being predicated . . . ?—so, implicitly, de Libera's translation); but it is better deleted.

⁷⁷ See below, pp. 310–311.

⁷⁸ Why do individuals not form a sixth item, giving Porphyry a hexad rather than a pentad? Elias says that the *Introduction* ignores individuals since they are the concern not of philosophers but of poets and orators (*in Isag* 36.1–3): they are introduced only to be distinguished and dismissed.

⁷⁹ For 'τέμνειν' see below, p. 112.

⁸⁰ ἄτομα: *Cat* 1b6–7; Bonitz, *Index* 120a48–b4; καθ' ἔκαστον: *Int* 17a40; Bonitz, 226a1–20; κατὰ μέρος: Alexander, *in Met* 100.28; *in Top* 86.25–27; 122.20; *et saep*; Sextus, *PH* II 45; ἐπὶ μέρους: Sextus, *M* VII 269; VIII 96, 100 (not in Alexander, who reserves the phrase to designate 'particular' propositions); μερικόν: Alexander, *in Top* 371.31–32 (but rare before Porphyry).

⁸¹ e.g. [Elias], *in Isag* xxxviii 1–6, distinguishes among ἄτομον, μερικόν, μοναδικόν, καθ' ἔκαστον; see also e.g. Gracia, 'Individuation', pp. 171–174.

one item and X is true of whatever Y is true of. Porphyry gives three examples at 2.18, and there are further examples at 7.19–27, where he explains what individuality consists in. In the commentary on the *Categories* we find, alongside Socrates and Bucephalus (76.34–35), this white colour and Aristarchus' grammatical expertise (76.1–8).

For substances may be introduced either universally—for example: animal, dog, man—or particularly—for example: Socrates, Bucephalus; and accidents are either universal or particular—for knowledge is a universal accident and Aristarchus' knowledge is a particular accident. (ibid 71.30–33)

Porphyry is here commenting on the *Categories*; but he has two other Aristotelian texts in mind:

Among objects [*πράγματα*] some are universal and some are singular. By universal I mean those which are such as to be predicated of several objects, by singular those which are not—e.g. man, for universals, Callias, for singulars. (int 17a38–b1)

Of all items which exist, some are such as not to be truly predicated universally of anything else—e.g. Cleon and Callias (singulars and perceptibles) . . . Of perceptibles, pretty well each is such as not to be predicated of anything, except accidentally—for we sometimes say that that white thing is Socrates and that what is approaching is Callias. (APr 43a25–36)⁸²

'Man' is such as to be predicated of several items, 'Socrates' is not. One difference between 'man' and 'Socrates' is that the former is true of several items and the latter of a single item.⁸³

Porphyry's choice of examples may seem perverse, on two opposing counts. First, are 'Socrates' and 'this' really individual predicates? After all, the name 'Socrates', like any other proper name, was carried by several distinct individuals; and the indexical pronoun 'this' can be applied to pretty well anything. (David says that there are two sorts of singular predicate: particulars, such as this man, and individuals, such as Socrates; and he adds that the former are called 'wandering singulars [*καθ ἔκαστα πλανώμενα*]' (in *Isag* 138.28–31). This is the earliest occurrence I can recall of the notion of a 'variable' expression.)

Nonetheless, a sentence which predicates 'Socrates' of Y is true only if, in that sentence, 'Socrates' designates an individual; and you understand

⁸² Aristotle continues by noting that 'it is not possible to demonstrate singulars of other items—but others of them' (ibid 43a39–40). Hence (contrary to a common opinion) Aristotle thinks that we can demonstrate the truth of singular propositions (so too *Met* 1086b33–37).

⁸³ But the question is complicated: see Additional Note (E).

the sentence only if you know which individual ‘Socrates’ there designates. So too for any other proper name. And something similar holds for ‘this’, and for other indexical terms: any day can be properly designated ‘today’; but if I say ‘My birthday’s today’, you fail to understand my words unless you realize that by ‘today’ I refer to one individual day.

Secondly, there are innumerably many items which contemporary logic counts as predicates and which are true of exactly one item—for example ‘cat on the sofa’, ‘museum of shirts and masculine elegance’, ‘sun’. Are these not clear cases of individual predicates? No: ‘sun’ is in fact true of a single object;⁸⁴ but, as Aristotle put it, it is ‘such as to be predicated of several objects’ (*Int* 17a39)—that is to say, the sense of the term ‘sun’ is not such that at most one item satisfies it. (But for a different interpretation of the phrase see Ammonius, *in Int* 98.7–12.)

Still, there are innumerably many predicates (in the contemporary understanding of the word) which are necessarily tied to a unique item—for example ‘number which is both even and prime’, ‘solution to this equation’, etc. Surely Porphyry ought to have noticed such items? Perhaps he did so. At 2.19–20 he refers to ‘accidents . . . which hold commonly, not properly of something’. An accident holds commonly if it holds of several items;⁸⁵ and an accident which holds ‘properly’ is one which holds of a single individual—‘even prime’ is a proper accident of the number 2.⁸⁶

Perhaps there are pertinent cases of this sort; but ‘even prime’ is not one of them—for the sense of the expression does not exclude its being true of more items than one. Then what of, say, ‘first man on the moon’, ‘last Hanoverian king of England’, ‘only begetter of these sonnets’? Such expressions do indeed exclude plurality by their very sense; but they are compound and not simple predicates—and Porphyry is considering simple predicates. It is not easy to find an example of a simple expression which both is a predicate according to the contemporary understanding and also has a sense which excludes plurality.

⁸⁴ More on the sun below, pp. 101–103.

⁸⁵ For the phrase ‘common accident’ see Aristotle, *PA* 639a18; Galen, *san tuend* VI 255; *comp med gen* XIII 950; Alexander, *in Top* 473.20; Sextus, *PH* II 228—only in Sextus does the formula look as though it were a piece of technical jargon.

⁸⁶ Boethius takes a different view: proper accidents are items such as ‘that white which is in this snow as subject’ (*in Isag*² 185.10—he is perhaps thinking of Porphyry’s example, ‘this white colour’, at *in Cat* 76.1–8). Proper accidents thus construed are what another terminology calls individual accidents.

Secondly, the account distinguishes genera from other predicates which hold of a plurality of items: (a) from species. [2.24-3.1]

Species, unlike genera, 'are predicated of items which do not differ in species but in number'. (At 15.15-24 genera and species are distinguished by further marks.) It is natural to take this to imply that if X is predicated of Y and of Z, and Y and Z differ in species, then X is not a species—'animal', say, is not a species, since it is true of Socrates (who is a man) and of Argos (who is a dog). So Porphyry here limits the term 'species' to what he will later call 'most special items'.⁸⁷ Or might the phrase 'do not differ in species but in number' rather mean that an account of what a species is will refer to difference in number and not to difference in species? Genera are distinguished from species inasmuch as every genus is predicated of items which differ in species but not every species is predicated of items which differ in species. (Some species are predicated of items which differ in species, so that some species are genera.) This second interpretation is attractive but artificial; for the account of species implicit at 2.25-26 is set out at 4.11-13, where Porphyry expressly comments that it applies only to most special items.

Aristotle uses the expressions 'differing in species' and 'differing in genus' but not 'differing in number'. No doubt this is an accident; for he frequently says that things are one or the same in number or in species or in genus:

Next [i.e. at *Met* 1016b31-35] he sketches another division of unity—the division which they habitually make use of . . . : some items are one in number, others in species, others in genus, others by analogy. (Alexander, in *Met* 369.2-5)

Items differ in X if and only if they are not one or the same in X.⁸⁸ Oneness in number corresponds to identity, as that notion is usually conceived of.⁸⁹ Hence items differ in number if they are distinct. If

⁸⁷ See below, pp. 104-108.

⁸⁸ See e.g. Aristotle, *Top* 103a1-24; 152b30-32; *Met* 1016b31-1017a2 (and Bonitz, *Index* 94a35-43); cf e.g. Alexander, in *Top* 58.6-24; Ammonius, in *Isag* 65.4-66.3.

⁸⁹ But ancient accounts of the matter are shaky. Thus Aristotle says that there are three ways of expressing oneness in number: a name plus a name (or a definition), a name plus a property, a name plus an accident (*Top* 103a25-31). And Alexander: 'Items are one in number with one another when they have several names but the object signified by them is one, e.g. polyonyms—for coat and cloak are one, since they reveal one and the same item in number' (in *Top* 58.8-11; cf ibid 395.11-21).

Socrates is in the bar and Plato is in the bar, then there are at least two men in the bar, and Socrates and Plato differ in number. If Cicero is at the bar and Tully is at the bar (and no-one else is at the bar), then there is one man at the bar, and Cicero and Tully are one in number.

Items differ in species if they belong to different species. So for sameness in species, there is a choice between:

(1) **a** and **b** are the same in species if and only if there is a species of which both **a** and **b** are members;

and:

(2) **a** and **b** are the same in species if and only if **a** is a member of every species of which **b** is a member and *vice versa*.

The two formulae are not in general equivalent: (1) makes Argos and Odysseus the same in species (since they both belong to the species animal), whereas (2) does not. But if 'species' is limited to most special items, then they become equivalent.

There is a similar choice for sameness in genus:

(1*) **a** and **b** are the same in genus if and only if there is a genus of which both **a** and **b** are members;

and:

(2*) **a** and **b** are the same in genus if and only if **a** is a member of every genus of which **b** is a member and *vice versa*.

It is clear that the Peripatetics opted for (2*); or that they held, equivalently, that **a** and **b** are the same in genus if and only if the lowest genus of each is the same. So it is reasonable to suppose that they preferred (2) to (1).

The account distinguishes genera (b) from properties.

[3.1–5]

In § 4 Porphyry will explain that there are four sorts of property: it is properties of the fourth sort—'properties in the strict sense' (12.20)—which are pertinent here. Roughly speaking, X is properly predicated of Y, in the strict sense, if and only if X is true of whatever Y is true of and Y is true of whatever X is true of. From this, Porphyry infers that a property is predicated of exactly one species, namely the species of

which it is a property.⁹⁰ Hence properties differ from genera, which are predicated of a plurality of species. The thesis that properties are predicated of a single species is repeated later in the *Introduction*.⁹¹ It is true only if 'species' is restricted to most special items. (Animal is a species, but not a most special item: any property of animal will be predicated both of that species and of each of its subspecies—though it will not be a property of any of the subspecies.)

The clause in the account of genera which distinguishes them from properties is the clause which has served to distinguish them from species. Similarly, the clause which will distinguish genera from differences is the clause which will distinguish them from accidents. In the latter case, Porphyry economically makes the two distinctions in one sentence. Why did he not do the same for species and properties?

There is a formal difference between the argument about species and the argument about properties. In the latter, Porphyry says that properties are predicated of a species and also of the individuals which fall under the species; in the former, he says that species are predicated of the individuals which fall under them. He does not say that species are also predicated of themselves.⁹² And yet just as all men are animals, so too all men are men; and if the former truth is the predication of a genus of a species, surely the latter is the predication of a species of a species.

Predication, in the Peripatetic tradition, is generally assumed to attach one item to another. It has been supposed that Aristotle expressly outlaws 'self-predication' at *Top* 112b21–26. But his argument requires only the thesis that nothing is predicated accidentally of itself—and perhaps that is all Aristotle intends to affirm.⁹³ On the other hand, few texts show any interest in self-predication. It has been supposed that Aristotle accepts it at *Top* 103b35–37:

Each of these items, when it is said of itself or when its genus is said of it, signifies what something is.

⁹⁰ See below, pp. 262–263.

⁹¹ At 3.5 the received text offers 'πλειόνων τε καὶ διαφερόντων'. Some MSS, and some MSS of Boethius' translation, add 'τῷ εἰδεῖ' after 'διαφερόντων'. This, the reading used by the mediaeval philosophers, requires the translation: 'but of several items differing in species'. The shift from 'one species' to 'several items' is difficult; and although the received reading is inelegant, 'which differ' being redundant, the same inelegant redundancy is found elsewhere (e.g. in *Cat* 82.20; Alexander, in *Met* 58.19; *quaest* i 11a [22.15–16]; Iamblichus, *apud Simplicius*, in *Cat* 438.26–27).

⁹² Nor that they are predicated of their properties—see below, p. 238.

⁹³ On the text see Slomkowski, *Topics*, p. 91.

But a few lines earlier he had said:

When, the item before us being a man, you say that the item before us is a man or an animal, you say what it is and its substance. (*ibid* 103b29–31)

That is to say, the predication in question are not of the form: 'X is predicated of X'. (See Alexander, *in Top* 67.5–7.)

There is a clear case of self-predication in the *Prior Analytics*: 'B is predicated both of itself and of C' (*APr* 68a19–20). But it is isolated. There is a casual example in Alexander: at *Top* 111a33–34 Aristotle says that 'of whatever the genus is predicated, one of the species must also be predicated'. Alexander observes that he ought to have added: 'unless it is a species next to the genus'. For example, animal is said of winged animal; but no species of animal is said of winged animal, which is a proximate species of the genus animal. Then Alexander adds:

Or is the species predicated of this too, if it is predicated of itself and is itself a species of animal? (*in Top* 161.2–8)

Porphyry does not mention self-predication. At 13.10–13 he remarks that genera, differences, properties and accidents are predicated of species; and at 13.16–17 he says that species are predicated only of the individuals under them. Thus he implicitly denies that species are predicated of themselves. But these ideas are not elaborated. Self-predication, it may be supposed, were either disregarded as trifling or else rejected as spurious.⁹⁴

However that may be, Porphyry says that properties are predicated both of their species and of the individuals under the species; and this suggests that there is a difference between being predicated of a species and being predicated of the items falling under a species. But surely to predicate a property of a species is to predicate it of every individual under the species? It is; but there is a distinction to be drawn. I might be said to predicate something of every individual under a species when I say, for example,

Every man laughs.

And I might be said to predicate something of every individual falling under a species if I say, of every individual man,

This man laughs.

⁹⁴ But individuals are often said to be predicated of themselves: above, pp. 78–80.

In the former case, but not in the latter, I have predicated something of the species.

As with predication, so with knowing. According to Theophrastus, ‘to know of every triangle that it has an angle-sum of 180° ’ is ambiguous; for you may know it ‘either universally or in respect of all the singulars’ (frag 133 = Alexander, *in Top* 154.11–13). That is to say, it is one thing to know that, if anything is a triangle, then it has 180° ; and another to know, of every triangle, that it has 180° .⁹⁵

Again, the account of genera distinguishes them (c) from differences and (d) from accidents. [3.5–14]

General and special predication answer the question ‘What is it [$\tau\acute{\iota}\acute{\sigma}\tau\acute{\iota}$]?’;⁹⁶ differential and accidental predication answer the question ‘What sort of so-and-so is it [$\pi\acute{o}\acute{i}\acute{o}\nu\tau\acute{\iota}\acute{\sigma}\tau\acute{\iota}$]?’ (At 3.19–20 the question ‘What is it like [$\pi\acute{o}\acute{s}\acute{e}\chi\acute{o}\nu\acute{\sigma}\tau\acute{\iota}$]?’ is associated with accidents.) The point returns at 15.2–3—with a back-reference—as one of the differences between genera and differences; and again at 17.10–13—without back-reference—as one of the differences between genera and accidents.⁹⁷

The question-test for general predication comes from Aristotle—at *Topics*, 102a31–35 (above, p. 65); and in the *Categories* it separates general and special predication from the rest:

If someone is saying what a particular man is, he will speak appropriately if he says the species or the genus (and he will make it better known if he says man than if he says animal); but if he says any of the other items, he speaks inappropriately—e.g. if he says white or runs or anything of that sort. (*Cat* 2b31–36)

The test is frequently used or alluded to by Porphyry (e.g. *in Cat* 80.4–7; 82.8–10; 92.8–10). It is done into Latin by Boethius (e.g. *div 88ob*). And it is ubiquitous in later texts. Here is an example from an undistinguished source:

⁹⁵ But ‘all the singulars [$\kappa\acute{a}\theta\acute{e}\acute{\kappa}\acute{a}\sigma\tau\acute{a}$]’ here means ‘every sort of triangle’ rather than ‘every individual triangle’; for Theophrastus has his mind on Aristotle, *APst* 74a25–32.

⁹⁶ Later, ‘What is it?’ elicits a species if asked of an individual, a genus if asked of a species: e.g. [Sergius], in Furlani, ‘Sergio’, p. 43.

⁹⁷ See also 18.16–17—differences vs species; 21.9–10—species vs accidents.

A genus is what is predicated, in answer to ‘What is it?’, of several items dissimilar in species, e.g. plant; for that is said of several dissimilar items—of vines, of fig-trees, of olive-trees (which are several and dissimilar). And it is predicated (i.e. it is spoken and said of them) in answer to ‘What is it?'; for if I say what an olive-tree is, I must name the genus and say that it is a plant. (scholia to Dionysius Thrax, *GG* I iii 117.1–6)

The question-test for differential predication is equally Aristotelian; for ‘every difference seems to indicate what sort of so-and-so something is’ (*Top* 144a21–22; cf Bonitz, *Index*, 61ob46–58). It is implicit in the second of the four accounts of differences which Porphyry rehearses (11.7–12); and it too is ubiquitous in the later tradition.⁹⁸ The question ‘What sort of so-and-so is it?’ presupposes that ‘What is it?’ has received an answer; for ‘so-and-so’ holds the place for the answer to ‘What is it?’.

If you say footed, you say what sort of animal it is; if you say animal you do not say what sort of footed item it is. (*Top* 128a28–29)⁹⁹

The third question, ‘What is it like?’ is not canonically Aristotelian; and in *Isag* it recurs only at 17.11–12 and 21.10 (but see also 8.12 and 9.6).¹⁰⁰

The coherence of Porphyry’s argument—and the coherence of the Peripatetic notion of a genus—depends on the force and the precision of the question-tests. Porphyry sets out the first two questions at 3.5–8 and offers some elucidation at 3.8–14. The elucidation—as it is transmitted—gets off to a bad start:

For when we ask that of which these items are predicated, they are not predicated, we say, in answer to the question ‘What is it?’ . . . (3.8–10)

The sentence has us asking ourselves a question—but in the numerous parallel cases, questioner and answerer are distinct.¹⁰¹ Moreover, it apparently has us asking a ‘meta-question’—a question about the status of a certain predicate. And that too is singular. Again, the Greek syntax (‘ἐρωτησάντων . . . ἐκεῖνο’) is dubious. Again, the manuscript tradition shows a serious and untypical degree of divergence. Finally, the

⁹⁸ e.g. in *Cat* 82.20–32; 95.6–8; Alexander, in *Top* 38.29–31; 47.14–18; Boethius, in *Cat* 177c; 192a; Simplicius, in *Cat* 55.1–2; scholia to Dionysius Thrax, *GG* I iii 118.32–119.5—paraphrasing *Isag*.

⁹⁹ Cf 11.11: ‘What sort of animal is it?’.—In Greek the question is ‘ποιόν τι,’ rather than ‘ποιῶν;’ (but note 17.12; 21.10; cf 18.16, 17).

¹⁰⁰ in *Cat* 134.1–3 apparently takes *ποιον εἶναι* as a kind of *πῶς ἔχειν*.—Neither properties nor accidents are ever characterized in terms of ‘What is it like?’, or of any other question.

¹⁰¹ But note in *Ptol harm* 126.4–7.

ancient commentators say nothing about the sentence. (Boethius, it is true, found it in his text; but he makes no comment on its difficulties.) Something is awry. No plausible emendation comes to mind, and I suppress the sentence as an intrusive gloss. In any event, it cannot help us to understand what Porphyry intends to say.

By contrast, 3.10-14 is textually unproblematical;¹⁰² but Porphyry merely gives three illustrative examples—he offers no general explanation of the questions. Two points are clear. First, the questions are Greek, not English. ‘What sort of so-and-so is it?’ and ‘What is it like?’ are no more than counters for the Greek, for which there is no idiomatic English. ‘What is it?’ seems to be a decent version of ‘τι ἐστι;’ but even here we should tread lightly. (In ordinary English, the question ‘What is it?’ does not, generally and as a matter of course, elicit a genus or a species as its answer. ‘What’s a saint?’—‘One whose breath doth the air taint.’ But this fact is irrelevant to the assessment of Porphyry’s question.¹⁰³)

Secondly, the Greek questions—unlike, say, ‘Where is it?’ or ‘When is it?’—are vague. Not that they naturally collect the same answers, but that they do not naturally collect discrete sets of answers. Aristotle was aware of this. Thus he says that

of common items, the one which is especially [*μάλιστα*] predicated in answer to ‘What is it?’ will be a genus (*Top* 108b22-23)

—where ‘especially’ gives the game away (cf 139a29-31). And again, in presenting what something is, it is more appropriate to state the genus than the difference (for one who says that a man is an animal shows what a man is more than [*μᾶλλον*] one who says that a man has feet). (*ibid* 128a23-26)¹⁰⁴

¹⁰² At 3.13, ‘Animal is the genus of man’, Porphyry uses the past tense, ‘ἦν’; and there are similar pasts at 12.7 and 15.2. Scholars have essayed various interpretations; but the ancients had a simple idea. See e.g. Alexander, in *Top* 42.4-6, on ‘τι ἦν εἶναι’: ‘He uses “was” here not as indicating past time but for “is”.’ This usage is normal: someone who says “It was so” says the same as “It is so”, using “was” for “is”. Cf Ammonius, in *Int* 212.15-18; Tropionius, *proleg* 9.18-26 (who cites 3.13 as a paradigm case of past for present).

¹⁰³ Less irrelevant is one of Pindar’s more celebrated lines: ‘What is anyone? What is no-one? Man is a dream of a shadow’ (*Pyth* viii 95-96). Or Isocrates: ‘He who remembers what a man is will complain of nothing which happens’ (frag 24).

¹⁰⁴ Note Simplicius, in *Cat* 85.23-27: ‘If someone presents what Socrates is, then if he presents the genus and the species—i.e. saying man or animal—, he will express himself more appropriately and will make the subject better known; but if he presents one of the other nine types of predication—e.g. white or six-foot—he expresses himself more inappropriately inasmuch as he bases his expression on an accident which does not show what the item is.’ ‘Six-feet tall’ is a less appropriate answer to ‘What’s Socrates?’ than is ‘A man’. But it is not a false answer.—For the ‘μᾶλλον’ at *Top* 128a23-26 see 3.10; Aristotle, *Top* 122b16-17; Alexander, in *Top* 314.15-25 (below, p. 351).

‘At high noon’ is not a less appropriate answer than ‘At Tombstone’ to ‘Where will the shoot-out be?’—it is no answer at all. ‘He is footed’ is merely less apt than ‘He is a man’ as an answer to ‘What is Socrates?’.

Thus ‘What is it?’ may elicit a differential predicate. At *Top* 101b18–19 Aristotle remarks that differences are ‘general’¹⁰⁵ and so should be dealt with in the discussion of genera; and Theophrastus agrees (frag 125 = Alexander, *in Top* 45.10–14). Alexander explains that differences are general because they are predicated of a plurality of items which differ in species and are ‘in what the thing is’ (*in Top* 38.27–39.2).¹⁰⁶ And Aristotle himself more than once says or implies that differences are predicated in answer to the question ‘What is it?’¹⁰⁷ On the other hand, Aristotle also and explicitly denies that differences are predicated in answer to the question ‘What is it?’, and Alexander echoes him:

Differences, even if they are said more widely than the species which are under them, are not predicated of them in answer to ‘What is it?’ nor as genera. (*in Met* 208.1–3)

There are issues here to which I shall return.¹⁰⁸ For the present, it is enough to note that the question ‘What is it?’ may attract a difference.

Again, Aristotle allows that ‘What is it?’ may ask for matter as well as for genus or species:

We say what bronze circles are in two ways: both by saying of the matter that it is bronze and by saying of the form that it is such and such a figure—and this is the first genus into which it is placed. (*Met* 1033a2–4)

And of course Aristotle frequently uses the question ‘What is it?’ to elicit a definition:

What something is [i.e. its definition] is proper to it and predicated in answer to ‘What is it?’ (*APst* 91a15–16)¹⁰⁹

¹⁰⁵ ‘γενικός’ here means ‘to be treated in the same way as a genus’—just as ‘δρικός’ at 102a5–11 and b27–35 (cf Alexander, *in Top* 45.16–20) means ‘to be treated in the same way as a definition’.

¹⁰⁶ Cf *in Met* 203.7–8 (‘Differences may also be called genera, as he said in the *Topics*’—Alexander thinks of 101b18); *in APr* 295.34–35 (‘Those items are predicated of something in answer to “What is it?” in the strict sense which are contained in its defining formula’).

¹⁰⁷ See *Top* 144a18–21; 153a17–18 (in the antecedent of a conditional sentence—but evidently one accepted for the nonce by Aristotle); 154a27–28; cf 132b35–133a3; *APst* 83a39–b1.

¹⁰⁸ See below, pp. 350–356.

¹⁰⁹ Cf e.g. *APst* 90b3–4; 93b29; *Met* 1078b17; Boethius, *in Isag*² 273.13–274.2.

Again, what of properties?

Properties are said in answer to ‘What is it?’; for if you ask: What is a man? you will correctly give the predicate: laughing. (Boethius, *in Isag*¹ 55.23–56.2)

This is not a casual remark: it recurs at 80.7–9, 99.20–23, 100.3–5, 123.15–16, 126.1. True, Boethius drops it from his second commentary; but to Boethius’ ears—and surely to some earlier Greek ears—‘What is it?’ might be answered by citing a property rather than a genus or a species.

Nor is the remark impertinent to the *Introduction*, the promise of which is to say what a genus is, what a species is, and so on (1.4–5). The commentators suppose that the best available answers to these questions give properties.¹¹⁰ Hence in the cases with which Porphyry is most concerned, an appropriate answer to ‘What is it?’ may cite not a genus nor a species but a property.

In short, the Greek question ‘τι εστί;’ seems to be no more determinate than its rough English counterpart. But perhaps ordinary Greek usage is not to the point? Perhaps Porphyry’s questions have a technical sense? And perhaps—this is the view of most commentators—they form a technical system? After all, systems of questions were common enough in ancient thought: Aristotle’s ten types of predication are often associated with ten questions; the second book of the *Posterior Analytics* provides a famous four; and

in his collection of rhetorical inquiries Porphyry says that the most general inquiries are three in number: If it is, What it is, What sort of so-and-so it is. (*syn rhet* 417 = scholia to Hermogenes, *stas*)

And there are other such rhetorical sets.¹¹¹

So why not a set of logical questions? So, more or less, Boethius:

There are three questions, to which genus, species, difference, property, and accident reply: What is it? What sort of so-and-so is it? What is it like? If someone asks what Socrates is, it is appropriate to reply by genus and species (either animal or man); if someone asks what Socrates is like, an accident will rightly be given in reply (i.e. either he is sitting or he is reading etc); and if someone

¹¹⁰ See above, pp. 58–62.

¹¹¹ e.g. Cicero, *orat* xiv 45, cited with approval by Quintilian, III vi 44, 80 (cf V x 53); cf e.g. Augustine, *rhet* 9–10; Martianus Capella, V vii 444. Some rhetoricians had groups of two or four or five questions (Quintilian III vi 31–104). Quintilian ascribes the set of four to Aristotle (vi 49—editors find a reference to *Rhet* 1416b20–21). The famous four of *APst* 89b23–35 also found their way into the rhetorical tradition: e.g. Trophonius, *proleg* 1.2–7. On sets of questions see Mansfeld, ‘Doxography’, pp. 3193–3208.

asks what sort of so-and-so Socrates is, either a difference or a property or an accident will be given in reply (i.e. either rational or laughing or bald). (Boethius, *in Isag* 2 265.21–266.7; cf Simplicius, *in Cat* 42.15–16)

It is evident that there is something rum about setting up a system of three questions in order to organize a pentad of items.¹¹² However that may be, if the three questions are a technical set, then what are their senses and what are their sources? A familiar Platonic distinction has been adduced. In the *Euthyphro* Socrates complains that Euthyphro has given a characteristic (*πáθos*), and not the substance (*oὐoία*), of piety, even though he was asked what it is (*ὅτι ποτ’ ἐστιν*) (*Euth* 11A). In the *Meno* Socrates asks:

If I don’t know what something is, how could I know what sort of so-and-so it is? (71B)

And in the seventh *Letter* we find this:

There are two items, the being of something and what sort of thing it is; and the soul seeks to know not what sort of thing it is but what it is. (*Ep VII* 343BC)

Thus Plato distinguishes two sorts of inquiry, and he marks them by two questions, ‘What is it?’ and ‘What sort of thing is it?’. And the anonymous commentary on the *Parmenides* paraphrases *Ep VII* 343BC in order to explain the difference between ‘What is it?’ and ‘What sort of thing is it?’ (IX 16–23).

But Plato is a red herring. His question ‘What is it?’ asks for a definition; and his two questions distinguish not genera from differences but definitional from non-definitional matter. Moreover, Porphyry has three questions rather than two. David, it is true, says that ‘what sort of a so-and-so it is and what it is like are the same’ (*in Isag* 142.9). He is commenting on 3.19; and both the structure of the Greek phrase there and a comparison with 3.10–12 support him. But although his interpretation is consistent with most of the *Introduction*, it is shaken by 17.10–13, where Porphyry seems to intend a distinction between ‘What sort of so-and-so?’ and ‘What like?’. Thus Elias plausibly suggests that ‘what sort?’ calls for differences and inseparable accidents, ‘what like?’ for separable accidents.¹¹³

¹¹² The later commentators elaborated a system of five questions—but even so there was not a one-to-one correspondence between questions and items: (1) ‘τι ἐστι;’—genus and species; (2) ‘δποιόν τι ἐστι;’—difference; (3) ‘δποιόν;’—property; (4) ‘ποιόν;’—inseparable accident; (5) ‘πώς ἔχον;’—separable accident. See e.g. David, *in Isag* 85.25–86.11; [Elias], *in Isag* xv 18–20.

¹¹³ *in Isag* 60.13–19; cf 76.28–77.2; correcting Ammonius, *in Isag* 62.21–24; cf 67.5–6.

If Plato is not behind the questions, whither shall we turn? Scholars have produced various theories, the best of which may be sketched as follows.¹¹⁴ Aristotle's ten types of predication may be grouped according to three questions: 'What is it?' answers to substance; 'What sort of thing?' to quantity, quality, relation, and time; and 'What like?' to the remaining four types of predication.¹¹⁵ Porphyry adapted this grouping of the Aristotelian ten, the adaptation being suggested by two passages from the *Organon*: *SEL* 178b37-39 and *Top* 120b36-37.¹¹⁶

The text at *SEL* 178b37-39 is disputed; but even on the reading most favourable to the thesis, there is no hint in it of the three Porphyrean questions. And *Top* 120b36-37 is still more remote. Nor do Porphyry's questions suggest any particular grouping of the ten Aristotelian predictions—which neither Aristotle nor his followers ever arranged into a triad. Moreover, it would be a monstrous confusion to imagine that the five Porphyrean items somehow corresponded—each or in little batches—to subgroups of the Aristotelian ten.

There is no Aristotelian source for Porphyry's three questions. There is no 'system' of three questions in any early text. I doubt if there was any such system in Porphyry. The questions do not form a set and do not have determinate technical senses.

It does not follow that the question-tests are entirely useless—after all, they exclude certain items from being general predicates of a given subject. ('What's Socrates?'—'In the agora.') But beyond that, they are at best a rough rule of thumb. Are they needed? Not to distinguish properties and accidents from one another or from the other three items, nor to distinguish genera from species. But they are all that Porphyry offers to distinguish differences from genera and species.

Suppose that man is by definition a rational mortal animal.¹¹⁷ Then something is a man if and only if it is (a) an animal and (b) mortal and (c) rational. But according to the traditional theory, the three conjuncts

¹¹⁴ I paraphrase de Libera, *Isagoge**, pp. cvii-cxxii; cf id, 'Aristote et Plotin', pp. 22-26.

¹¹⁵ But at *Isagoge**, pp. cix and 44 de Libera identifies the 'What is it?' question with $\tau\acute{\iota}\ \hat{\eta}\nu\ \epsilon\iota\hat{\nu}\alpha\iota$; at p. cxi 'What sort?' is restricted to quality and 'What like?' covers the other eight categories (so too Boethius, in *Isag*² 317.10-17).

¹¹⁶ De Libera also suggests that the Stoic 'categories' may come into the picture: see Additional Note (A).—Elsewhere he says that 'the whole of § 10 [i.e. 3.5-14] takes up theses of *Met Z* 1, 1028a10 ff and *Met Z* 1, 1028a15 ff' (*Isagoge**, p. 43 n. 32). These texts, however, contain a reference to the ten types of predication ('what it is, . . . , of what sort, how much, and each of the other items thus predicated': a11-13); and there is no link with *Isag*.

¹¹⁷ For the history of this stock definition see DeDurand, 'L'homme raisonnable'.

(a), (b), and (c) are not on a level: rather, (a) is a general predicate of men and (b) and (c) are differential. Why not put all three on the same level? If there must be a hierarchy, why pick out (a) rather than (b) or (c) for the leading rôle? Why say that a man is an animal which is rational and mortal rather than a rational item which is animate and mortal? The Peripatetic response is this: ‘animal’ answers the question ‘What is a man?’, whereas ‘rational’ does not—or at least does not answer it as appropriately. The response is inadequate.

Thus genera are adequately distinguished from other predicates. [3.14–20]

The summary of 2.22–3.14 offers no new points—save the introduction of the question ‘What is it like?’.¹¹⁸

The delineation of genera ‘contains nothing excessive and nothing deficient’ (3.19–20): Porphyry might mean (i) that no clause in the delineation is idle nor is any additional clause needed, or else (ii) that the delineation does not apply to any object to which it should not apply and does apply to every object to which it should apply. The commentators opt for (ii), without mentioning (i);¹¹⁹ and ‘contain [$\pi\epsilon\rho\iota\epsilon\chi\epsilon\nu$]’ in the *Introduction* is standardly used in something like the sense supposed by (ii).¹²⁰ Moreover, it is a truth universally acknowledged that definitions—and hence, presumably, delineations—must include neither too much nor too little.¹²¹ Again, if Porphyry intends (i), then he is mistaken: the clause ‘of several’ is superfluous, being implied by ‘which differ in species’.

¹¹⁸ Three textual notes: (i) At 3.15 Boethius’ translation ignores the ‘ $\alpha\dot{\nu}\tau\omega$ ’ in the Greek MSS: like Tricot, *Isagoge**, p. 16 n. 3, I follow him. (ii) At 3.19 the nominative ‘ $\acute{\epsilon}\kappa\alpha\sigma\tau\omega$ ’ is bizarre: read ‘ $\acute{\epsilon}\kappa\alpha\sigma\tau\omega$ ’ or ‘ $\acute{\epsilon}\kappa\alpha\sigma\tau\omega$ ’—Boethius translates ‘*de his de quibus*’. (iii) At 3.20 ‘ $\tau\hat{\eta}\acute{\epsilon}\acute{\epsilon}\nu\acute{\omega}\acute{\alpha}s$ [of the concept]’ is not translated by Boethius and is probably a gloss (intended to make explicit the fact that the account of genera is a conceptual account or delineation and not a definition).

¹¹⁹ See e.g. Ammonius, *in Isag* 67.14–68.24; Boethius, *in Isag*¹ 59.14–63.16; *in Isag*² 196.18–197.12 (cf *div* 885A).

¹²⁰ See below, p. 114.

¹²¹ See e.g. Aristotle, *Top* 140a24–27, b21–26; Cicero, *inv I* xlix 91; Alexander, *in Top* 42.27–28 (reporting a Stoic view); Victorinus, *def* 29.14–16; Simplicius, *in Cat* 28.13–29.1; Ammonius, *in Cat* 27.9–15; John of Damascus, *dial* 8.

§2: SPECIES

In one sense ‘species’ means ‘shape’. [3.22–4.1]

‘Species’, like ‘genus’, is ambiguous (1.18). Aristotle does not remark on the fact; and the three ways in which items may be ‘other in species’ (*Met* 1018a38–b8) are not pertinent here. Porphyry notes two senses. Elsewhere, he distinguishes between ‘shape [$\muορφή$]’ and ‘figure [$\sigmaχήμα$]’ and indicates that the word ‘species’ may be used of either:

Shape and figure—and in general, species—are principles. (*in Phys* 120 = Simplicius, *in Phys* 10.31–32)

(Alexander notes that Aristotle ‘calls the figure and shape species’: *in Met* 413.23–24, on *Met* 1022a6.) And the grammarian Heliodorus observes that ‘“species” signifies three things’, namely shape and figure and ‘what is divided under a genus’.¹

Porphyry also thinks that ‘shape’ is ambiguous—or at least that Aristotle uses it in two senses:

Shapes are so-called by Aristotle in two ways: in one meaning, he speaks of substantial shapes and in the other of surface lineaments which show themselves on the substantial shapes. (*in Cat* 133.14–16)

This corresponds to a distinction which the Peripatetics made between species and shape:

Species differs from shape inasmuch as the former penetrates the depths and the latter is superficial—the latter is similar to the whiteness in painting, the former species [$\epsilonιδοποιεῖ$] the substance of milk; but species is also called shape inasmuch as it both species [$\epsilonιδοποιεῖ$] and shapes [$\deltaιαμορφοῖ$] the matter. (Arius Didymus, frag 3 = Stobaeus, *ecI* I xii 1b)

Thus things are more involved than 3.22–4.1 lets on.

Porphyry’s illustration of the first sense of ‘species’, which is repeated by Heliodorus, is a line from Euripides’ lost *Aeolus*. The quotation will no doubt have been familiar to Porphyry’s readers.² In any event,

¹ *GG* I iii 551.34–552.6—he further distinguishes two grammatical senses of the term (*ibid* 385.15–23). A grammatical scholiast says that ‘ $\epsilonιδος$ ’ is used in three ways: of what falls under a genus, of shape, and of grammatical type: *ibid* 363.28–32.

² Euripides, frag 15; four lines cited by Stobaeus, *ecI* IV xxi 1; numerous additional citations of the line quoted by Porphyry. The illustration is opaque if you do not know your Euripides; and the mediaeval tradition discovered something more intelligible: ‘Priam’s

‘shape’ there means ‘surface lineament’. So Porphyry does not signal the use of ‘species’ in the sense of ‘substantial shape’—that is to say, as form in opposition to matter. This is one of its more significant philosophical uses, and one which will be seen at 11.12–15. Nor does Porphyry indicate that the words ‘species’ and ‘genus’ were often used interchangeably—so that a further sense of ‘species’ is ‘genus’.³

In a second sense a species is what is under a genus—a description which imports a circularity. [4.2–9]

A species, in the second and pertinent sense, is something which falls under a genus ‘of the sort presented’.⁴ Porphyry offers three illustrative examples, which belong to two different Aristotelian types of predication: ‘man’ to substance, ‘white’ and ‘triangle’ to quality. In §1 all the examples of genera were substances; and you might have supposed that genera were found only among substances. This was not Porphyry’s view:

the species and the genera of substances are themselves substances, those of accidents accidents. (*in Cat* 75.19–20; cf 76.24–25)

Alexander says that ‘there are genera and differences in each type of predication’ (*in Top* 65.29–30), and it is a Peripatetic commonplace.⁵ The *Introduction* does not make the point explicit until 4.15–16; but, as Boethius remarks (*in Isag*¹ 64.22–65.4), the examples here imply it.

The example of ‘triangle’ was doubly contested. First, Plotinus had asked whether shapes were not quantities rather than qualities (*enn* VI iii 14.7–35); and in his commentary on the *Categories* Porphyry takes

species is appropriate to a tyranny’. The discovery took the form of a false reading in Boethius’ translation of the *Introduction* (*Priami* for ‘*primum*’, a scribal error or a genial correction).

³ See above, pp. 26–27.—For the parallel use of ‘species’ in Latin see Cicero, *Top* vii 30: ‘. . . *formae*, which the Greeks call *εἶδος* and our people—if they happen to speak of such matters—name *species*’. Cicero preferred ‘*forma*’ on grounds of euphony; but it never caught on (cf. e.g. Seneca, *ep* lxx 4; Victorinus, *in rhet Cic* I ii [165.34–44]).

⁴ At 4.2 the phrase ‘ὑπὸ τὸ ἀποδοθέν γένος’ is commonly taken to mean ‘under a given genus’, as often in the *Topics* (e.g. 121a20; 121b25; 122a16; cf Alexander, *in Top* 347.4; 362.10). But that has no sense here: better, take ‘ἀποδοθέν’ to refer back to ‘ἀποδεδώκασι’ at 2.15 (and forward to 4.5)—a parallel at Aristotle, *Cat* 15b6. But it is tempting to delete ‘ἀποδοθέν’.—At 4.7 the same phrase is found in the Greek MSS: Boethius, and the Syriac version, omit ‘ἀποδοθέν’, and I follow them.

⁵ Alexander is thinking of such passages as *Top* 103b19–39 (or *Met* 1030a17–27); cf e.g. Clement, *strom* VIII vi 20.2.

some pains to support the Aristotelian view that they are qualities (*Cat* 10a11-16; *in Cat* 132.20-133.6).⁶ Secondly, some commentators objected that shape is not a genus at all; for the items falling under it are ordered, and there are no genera for ordered sequences.⁷ The suggestion that shapes form such a series comes from Aristotle (*An* 414b20-33).⁸

In introducing genera, Porphyry referred to species; and in introducing species he now refers to genera. So, as he notes, there is a circularity or reciprocity between the two accounts. He argues that such reciprocity is inevitable—for genus and species are correlative items. The commentators applaud him:

Some criticize the formula as being reciprocal; for in the definition of genera we mentioned species and in the definition of species we mentioned genera. They fail to see that in the case of relational items reciprocal proofs should be welcomed rather than rejected. ([*Philoponus*], *in Isag* 11b48-12b2)

David goes further. He notes that the account of species at 4.11-12 does not overtly refer to genera; he faults it for that very reason; and he invents a reciprocity behind the text (*in Isag* 144.32-145.4).⁹

The point goes back to Aristotle. It is in general a mistake, he urges, to define one opposite by another.

But we should not overlook the fact that some items presumably cannot be defined otherwise—e.g. double without half, and items which in their own right are said with relation to something. For with all such items to be is the same as to be in a certain relation to something, so that it is impossible to know the one without the other. Hence it is necessary that each should be included in the account of the other. (*Top* 142a26-31)¹⁰

So relational items require reciprocal accounts.

But reciprocal accounts do not satisfy the conditions standardly set on definition; for the terms in a definition must be ‘more familiar’ than the definiendum, and one correlative is as familiar as the other. Hence—so

⁶ Cf *in Ptol harm* 61.9-12; Alexander, *in Top* 107.8-10 (the term ‘dagger’ signifies a quality); Simplicius, *in Cat* 153.3-5 (triangles are qualities in one respect, quantities in another).

⁷ See Ammonius, *in Isag* 71.25-74.3. For the principle see below, pp. 332-335.

⁸ But note [Aristotle], *div* 64.

⁹ Philoponus insists that ‘reciprocal proof’ is not only unobjectionable but actually necessary in the case of relational items (*in Isag* 204.9-13); but he then denies that there is any reciprocity involved in Porphyry’s accounts: genera are defined in terms of species, but species—as 4.11-12 shows—need not be defined in terms of genera (204.30-205.2).

¹⁰ See e.g. Alexander, *in Top* 441.7-8; Victorinus, *def* 23.9-16; al-Tayyib, *in Isag* 88.

the argument goes—an account of a relational item cannot be a definition. The point was seized on by the sceptics. Sextus Empiricus, observing that causes are causes of effects and effects effects of causes, infers that both causes and effects are incomprehensible—we cannot arrive at an understanding of either term inasmuch as each presupposes an understanding of the other (*PH* III 27–28). Porphyry takes a less pessimistic line: neither genera nor species can be defined—but we can grasp them by way of reciprocal accounts. He does not say at 4.3–9 that a reciprocal account cannot be a definition; but that he thought so emerges from a passage in the commentary on the *Categories*. Porphyry detects a reciprocity in Aristotle's account of qualities at *Cat* 8b25–26. He remarks that 'were a definition being presented, this would be an error'; but in fact there is no error, since Aristotle means to offer a delineation (*in Cat* 128.1–15—the text is lacunose, the sense clear).

Thus we may be reasonably sure that, according to Porphyry, the accounts of genera and species which he presents in the *Introduction* are delineations, in the technical sense of that word. They are delineations because 'genus' and 'species' are correlative terms, and such terms do not admit definition.¹¹

Porphyry's argument needs scrutiny. First, he says that 'a genus is a genus of something and a species a species of something'; but this is too weak to establish reciprocity: Porphyry needs to say—and no doubt means—that a genus is a genus of a species and a species a species of a genus.¹² That is to say, G is a genus of S if and only if S is a species of G. Porphyry infers, after Aristotle, that an account of genera must mention species, and *vice versa*.

The inference is unconvincing. One integer is greater than another if and only if the other is less than it. 'Greater than' might be explained thus:

n is greater than **m** if and only if there is a **k** such that **n** = **m** + **k**.

This explanation does not use the expression 'less than'. As for genera and species, here is one way of going about things. First define the notion of a 'typical' predication, thus:

¹¹ See above, pp. 57–62.—Whether the other three items—difference, property, accident—can be defined is not thereby settled.

¹² The Greek MS tradition makes him say exactly that; for that is the force of the phrase 'έκάτερον έκατέρου' ('each of the other') at 4.8. But the phrase is not translated by Boethius; and it is clear from Ammonius' comment (*in Isag* 76.6–7) that he did not read it either: 'έκάτερον έκατέρου' is a (correct) gloss.

X is a typical predicate if and only if there is something of which X is predicated in answer to 'What is it?'

Then:

X is a general predicate if and only if X is a typical predicate and there is a distinct typical predicate Y such that X is predicated of Y in answer to 'What is it?'

X is a special predicate if and only if X is a typical predicate and there is a distinct typical predicate Y such that Y is predicated of X in answer to 'What is it?'

The old masters give several accounts of species. [4.9-14]

How many accounts does Porphyry report? The plural 'the others' at 4.13 shows, in its context, that there are more than two. One account is uncontroversially found at 4.11-12:

- (3) A species is what is predicated, in answer to 'What is it?', of several items which differ in number.

The text at 4.10-11 is syntactically indeterminate. The ancient commentators find two accounts therein:

- (1) A species is what is ordered under a genus,

and

- (2) A species is that of which a genus is predicated in answer to 'What is it?'.¹³

But the lines have been taken to offer a single conjunctive account:¹³

- (2*) A species is something which is ordered under a genus and of which the genus is predicated in answer to 'What is it?'.¹³

¹³ Ammonius finds two delineations at 4.10-11: in *Isag* 70.20-24; 76.13-21 (did he read 'ἢ' instead of 'καὶ' at 4.10?—see 70.22); so too e.g. [Elias], in *Isag* xxxii 10. Boethius agrees at in *Isag*¹ 65.13-18 and in *Isag*² 203.16-19; but at in *Isag*¹ 68.7-9 he explicitly treats 4.10-11 as giving a single delineation. Minio-Paluello's punctuation puts the conjunctive account into Boethius' translation; several modern translators, among them Maioli and de Libera, opt for the conjunctive version.

In that case, a third account must be found at 4.2:

(1*) A species is something which is under a genus.

The conjunctive (2*) seems unlikely; and I side with the ancient commentators.¹⁴ Again, (1*) is not presented as one of the accounts which the Old Masters have offered: it is Porphyry's own introduction of the pertinent sense of 'species'. There is a parallel at 2.11 and 15–16, on genera, and at 12.24 with 13.3, on differences.¹⁵ Thus Porphyry presents three magisterial accounts of species, namely (1), (2), and (3).

None of these is to be found in so many words in Aristotle; and I have noticed no exact parallel to (2). Something like (1) is found among the rhetoricians:

A genus is what contains several parts, e.g. animal. A part is what is subordinate to a genus, e.g. horse. But often the same thing is a genus of one item and a part of another; for man is a part of animal and a genus of Theban or Trojan. (Cicero, *inv I xxii 32*)¹⁶

And also among the Stoics:

A species is what is contained by a genus. (Diogenes Laertius, VII 61)

But a Stoic species, like a Stoic genus, was supposed to be a concept.¹⁷ Account (3) was a commonplace.¹⁸ Heliodorus ascribes it, generally, to 'the philosophers' (GG I iii 397.5–8), and he also adapts it to the needs of the grammarian.¹⁹ It is cited, without comment, by Dexippus (*in Cat* 30.20–22). So too Porphyry at *in Cat* 82.10–14—and it has already appeared at 2.25–27.

According to Porphyry, (3) is 'a presentation of what is most special and of what is only a species' (the 'and' is epexegetic). A species is 'most special' if and only if there is no type of which it is predicated in answer

¹⁴ But note a scholium to Dionysius Thrax, GG I iii 117.6–7: 'Species are what are contained in genera and reveal the proper substance, e.g. man, horse, lion.'—If there is not a conjunctive account, then the simple 'καὶ' which links (1) and (2) is a little odd; and it is tempting to read 'καὶ <οὐτως> οὐ τὸ . . .'.

¹⁵ So I have not translated the 'καὶ' at 4.9 (nor at 13.3), supposing that it has no semantic value.

¹⁶ Cf Cicero, *de orat* I xlii 189; Martianus Capella, IV 345 (cf 354); Boethius, *div* 880A; *in Cic Top* 1065A; 1106B.

¹⁷ Cf Cicero, *Top* vii 31: 'They define genus and species thus: a species is a concept the difference of which can be referred to a genus as its head and as it were source.'

¹⁸ e.g. Alexander, *in Top* 47.10–12; Martianus Capella, V 477; Boethius, *in Cat* 177B; Simplicius, *in Cat* 54.28–55.1; [Sergius], in Furlani, 'Sergio', pp. 37, 42.

¹⁹ See GG I iii 397.1–398.2; cf. 242.22–30.—Dionysius Thrax had given a different definition: 12 [43.1–44.1] (above, p. 64).

to 'What is it?'; or, equivalently, if and only if it is not also a genus. Thus (3) confines the term 'species' to what are conventionally called lowest species, *infimae species*. It might seem that a genus, which is predicated of a species in answer to 'What is it?', is also and thereby predicated of individuals in answer to 'What is it?'—and therefore satisfies (3). But in (3) the phrase 'differ in number' is intended for 'differ in number alone'.

Boethius approves of the limitation of 'species' to lowest species: types which are not most special, he says, are genera rather than species—it is the most special species which are 'truly species' (*in Isag*¹ 67.10–11; 68.14; 69.22).²⁰ Plotinus sometimes takes species to be lowest species—as when he says of certain items that

they are genera since, below them, there are other smaller genera, and after that species, and individuals. (*enn* VI ii 2.12–13)

So too Alexander:

a species is not predicated of several items which differ in species, but it is predicated, in answer to 'What is it?', of several items which differ in number. (*in Top* 47.10–11; cf 123.24–26)

When Aristotle distinguishes between 'species' and 'genus', 'species' often appears to have a sense corresponding to account (1) or (2),²¹ but in some texts it appears to be restricted in the fashion of (3)—so, for example, *Cat* 2a14–16 (contrasting with 2b22–23). Moreover, it has been maintained that it is (3) which gives significance to the notion of a species and to its distinction from the notion of a genus.²²

²⁰ Elsewhere Boethius notes that 'there are two forms of species' (*in Isag*² 203.19). Philoponus observes that things are called species both properly and commonly—in the proper sense, a species is the same as a form; commonly, a species is said either 'in its own right' (i.e. of a lowest species) or 'relationally' (i.e. of a species of a genus) (*in Isag* 203.19–26); and a little later he says that both species and genera are spoken of in two ways: absolutely and relatively—in the absolute sense 'species' designates lowest species and 'genus' highest genera (205.16–22).

²¹ See e.g. *Phys* 227b11–12: 'if some items are at the same time both genera and species . . .'

²² See Balme, 'Γένος', pp. 81–82, citing *Sens* 448a13–17 and *GA* 784b21 for (3)—see also *PA* 640a23–25.—Balme holds that 'the real significance of the distinction between genus and species lies not in its relative use at all levels, but in its absolute use at the level of the *infima species*' (p. 84). This use is supposedly significant for two reasons: (a) species are abstracted from objects given in sense-perception whereas genera are abstracted from abstract items; and (b) a genus exists only insofar as one of its species is actualized.—On genus and species in Aristotle's biology see esp Balme, 'Γένος'; Pellegrin, *Classification*, pp. 50–112; Balme, 'Division and differentiae'; Pellegrin, 'Logical and biological difference'; Granger, 'Genus-species relation'.

The first two accounts—

(1) A species is what is ordered under a genus

and

(2) A species is that of which a genus is predicated in answer to 'What is it?'

—are not free from difficulties. First, they are not evidently equivalent; for (1) makes no reference to predication in answer to 'What is it?' (unless the verb 'order' conceals such a reference). Secondly, both (1) and (2) appear to let individuals count as species; for genera are predicated of the individuals which fall under them. The ancient commentators note these unwelcome results, and describe the two accounts as 'approximate' or 'incomplete'.²³ David indeed thinks that all three accounts (which he takes to be attempted definitions) are incomplete; and he proposes to replace them by:

(4) A species is something subordinate to a genus which is predicated, in answer to 'What is it?', of several items which differ in number.

(See in *Isag* 145.9–13.)

However that may be, Porphyry's presentation is less than luminous. He appears to introduce a philosophical sense of 'species', for which he offers three accounts. But it turns out that there is not one philosophical sense of 'species' but two, and that the three accounts do not sketch the same notion. The ambiguity is irritating, and it runs through the rest of the *Introduction*.

The third account, which applies only to lowest species, requires that a species have a plurality of members.²⁴ (And if a lowest species has more than one member, then so does every species.) The requirement is clear; yet elsewhere Porphyry rejects it:

—Species were said to contain several items: is that always so?

—No; but it is so in the majority of cases. The phoenix (the bird),²⁵ although it is a species, is not said of several items. (in *Cat* 82.33–37)

²³ See Ammonius, in *Isag* 76.20–22; Boethius, in *Isag*¹ 66.8; Arethas, in *Isag* 32.6–15.—For the notion of a 'complete' definition see e.g. Alexander, in *Top* 466.14; Martianus Capella, IV 349; Trophonius, *proleg* 2.17–32.1.

²⁴ See above, p. 64.

²⁵ 'The bird' because 'φοῖνιξ' also means 'date-palm'.

Boethius remarks that the phoenix, the sun, the moon, and the earth are all unique members of their species.²⁶ Then why does the *Introduction* say that a species is predicated of several individuals? Either because it is so in the majority of cases, or else because a plurality is always imaginable. (If we imagine other suns, the term ‘sun’ applies to them too.)²⁷ The second explanation derives from Aristotle.

Some people, Aristotle says, think that they can define individuals—for example, the sun or the moon. But in fact

they posit items which can be true of something else—e.g. if there were another item of that sort, plainly it would be a sun. So the account is common. But the sun is an individual, like Cleon or Callias. (*Met* 1040a33–b2)

Although the sun is an individual substance and the term ‘sun’ applies to it uniquely, nonetheless ‘sun’ is a general term; that is to say, the sense of the word does not confine it to a single referent.

Alexander took a different line:

That which is in fact a genus is removed if everything under it is removed; and it is removed as a genus if of the items under it one alone—one either in number or in species—remains. For animal is a genus not because it is animate perceptive substance but because such a nature is in several items differing in species from one another. And if they are removed, and one alone remains, then animate perceptive substance—i.e. animal—will no longer be a genus. (*in Top* 355.18–24)²⁸

Alexander talks of genera rather than of species; but elsewhere he illustrates the point with an example of a lowest species, and the result is this: if every individual man is removed, then man—which is in fact a species—is removed; if all men but one are removed, then man remains—but is no longer a species. Species must have at least two members. But if you bump off every man but Clint, Clint does not automatically disappear—indeed, he does not even cease to be a man. All that happens, logically speaking, is that ‘man’ is not predicated specially of him.

²⁶ So too God the Creator . . . Porphyry’s Christian readers did not like this; as Arethas explains, ‘the sun, and the creator of the universe, being individuals, do not have a genus or a species’ (*in Isag* 64.22–24).

²⁷ See *in Isag* 2 215.2–6 and 218.1–219.22; cf *in Cat* 177CD.

²⁸ See also e.g. *quæst* i 3 [8.13–17]; 11a [21.26–28; 22.6–14]; *in Xenocr* pp. 9–10; Simplicius, *in Cat* 85.13–14. Cf e.g. Syrianus, *in Met* 28.19–22; Elias, *in Cat* 166.35–167.2 (below, p. 272).—On ‘removal’ see below, pp. 244–245.

This seems footling—or worse. For what, on Alexander's view, is the actual standing of the word 'sun'? and what would be the standing of 'animal' on the hypothesis that all animals other than man have been removed? Presumably 'sun' is an individual predicate—of which, perhaps, 'heavenly body' is specially predicated. The hypothetical 'animal' is more refractory: neither general nor individual, certainly not differential or proper or accidental—and not special either, since it is neither a lowest species nor a species which is also a genus. It must be *sui generis*—that is to say, there are, or at least there might be, predicates which belong to none of Porphyry's five types.

Porphyry's view of the matter was different: species hold of a plurality of items 'for the most part'. He distinguished between two sorts of item:

So, he says, for indestructible items, as for the universe—and even for parts of it—uniqueness is appropriate; but for destructible items, plurality—for were there not several items participating in the same account, but one alone, and that destructible, then the species would perish when that was destroyed; but the universe must always be a complement of species. So Porphyry. (*in Tim* frag 55 = Proclus, *in Tim* I 440.10–16)

Not all species require a plurality of members; but species of mortal items do. For the universe must always contain examples of all species, so that mortal species must have member on member.

Why the universe must always contain examples of all species is no doubt a theological question. But the theology does not raise any logical problems. Porphyry might replace (3) by, say:

(3*) A species is what is predicated in answer to 'What is it?' of items (one or more) which do not differ in species from one another.

That might be suspected of circularity; but I have already given a non-circular account of species which does not require that they each have a plurality of members.

There is a further complication caused by a passage from Simplicius: Some differences are said of only one species—as light of fire . . . , heavy of earth. And there are some unitary species even among perceptible items—all the eternal items (sun, moon, and each of the heavenly bodies²⁹), and also among generated items, as they report, the phoenix (the bird). So how is a species said of several items differing in number? Perhaps it is predicated of several phoenixes

²⁹ Reading 'ἀστρων' for 'ἀλλων': cf Alexander, *in Met* 96.4; 198.6; 201.34.

even if the individuals do not exist at the same time but rather in sequence? And among eternal items, if it is not said of several items, then this is not the sort of species which we are presently investigating—the species which is unassigned and considered in several items—but rather the species which is assigned in matter and is singular; for should there be several items of such-and-such a sort, then the sort of species under investigation holds of all of them. And this sort of species seems to be intermediate between individuals and species properly so called. As for differences, Porphyry says that for the most part—not always—they are said of several items; and Iamblichus says that even if some differences are not said of several species, yet even these are such that, as far as they are concerned, they might be said of several. (*in Cat* 55.27–56.10)

If we consider an assigned species and ask how many items it assembles, then the answer may possibly be: One—so it is for the question ‘How many suns are there?’. But when we say that a species is said of several items, we are speaking not of the assigned but of the unassigned species.³⁰ And that species never contains a single member.

Then what is the question which asks a number for the species ‘sun’ and gets the answer ‘Several’? Surely: ‘How many suns might there be?'; or better: ‘Of how many items is the word “sun”, in virtue of its sense, capable of being true?’. In that case, Simplicius subscribes to the view of Aristotle and of Boethius—and tarts it out in metaphysical rags. Was it also Porphyry’s view? Perhaps so—but it is different from the view he expressed in *in Cat* and in *in Tim*; and Simplicius names him in connection not with the point about species but with an allied point about differences.³¹

Finally, why not allow species with no members? Not like the dodo, which now has no members but was once populous; rather, like the phoenix, a species which never had any members, or the yeti, a species which (for all we know) may have none. If you hold, with Aristotle, that a universal term is one which, in principle and in virtue of its sense, may hold of a plurality of items, then there seems to be no reason why you should not allow that some such terms as a matter of fact are true of nothing at all. So there are special predicates which hold of nothing, and species which contain no members.

Then why reject empty species? Well, species are essentially items of which there are definitions, and it is a familiar Aristotelian point (e.g.

³⁰ For assigned and unassigned universals see below, pp. 328–329.

³¹ On which see below, p. 193.

APst 92b4–11) that there is no defining so-and-so's unless some so-and-so's exist. This argument may seem merely stipulative. It has been buttressed by a different reflection. In order to explain what, say, a horse is we must refer to an exemplar: 'A horse is an animal of the same sort as *that one*'.³² For just as no set of descriptions suffices to give the sense of an ordinary proper name, in the same way species terms resist definition by description—and in the end we must fall back upon ostension. Ostension requires an object; for I can only point to a horse if there is a horse there to point to. Consequently, species terms have sense only if the species they determine has (or at any rate had) at least one member. This may be an appealing argument; but it will not buttress the Aristotelian edifice—for it denies, and Aristotle affirms, that species are definable by descriptions.

There are most special items, most general items, and intermediates. [4.14–20]

The distinction drawn at 4.12–14 and the term 'most special' need elucidation; and the elucidation will itself need further elucidation (4.21). Thus the next stretch of text (4.14–6.1) offers, first, a general account of the three types of item; then an illustration—which shades back into a general explication; and finally formal accounts of what is most general, etc.

A passage from the commentary on the *Categories* gives the gist of the matter:

Of things said universally, some are genera, some are species, and some are differences. Of genera and species, some are only species—those which divide into individuals—and some are only genera—those for which there is no longer a higher genus. Those which are between these, being species of what is superordinate and genera of what is subordinate, are, reasonably enough, subaltern genera. (*in Cat* 83.18–23)

The tripartition was known to Sextus, who treats it as a commonplace: Of things which exist, some are highest genera—according to the Dogmatists—, some are last species, some are both genera and species. (*PH* I 138)

It is found, more or less, in Aristotle, *APr* 43a25–32.³³

³² See Sextus, *M* VII 267; *PH* II 65 (reporting the view of Epicurus).

³³ Quoted above, p. 79.

The elements may be defined in terms of 'typical' predication.³⁴ Say that

X is more general than Y if and only if X is predicated typically of everything of which Y is predicated typically, but not *vice versa*;
that

X is more special than Y if and only if Y is more general than X;
and that

X is between Y and Z if and only if Y is more general than X and X is more general than Z.

Then:

- (1) X is most general if and only if nothing is more general than X
- (2) X is most special if and only if nothing is more special than Y
- (3) X is an intermediate if and only if there are Y and Z such that X is between Y and Z

Porphyry states that 'for each type of predication' there will be: (i) some most general items;³⁵ (ii) some other, most special items; (iii) yet other intermediate items; and (iv) individuals. If there is a genus, then there are species; and if there is a species, then there are individuals—those claims have already been examined.³⁶ If there is both a genus and a species, then—on the assumption that every chain of genera and species is finite³⁷—there is a most general item and a most special item. But why must there also be intermediates? Why might there not be a type of predication with a highest genus, a lowest species, and individuals? And why, come to that, must every type of predication contain at least one genus?³⁸ Well, Porphyry does not say that these things must be so: he says that they are so.

The superlative adjectives 'most special' and 'most general' are not found in Aristotle; nor is either of the comparatives, nor the positive

³⁴ See above, pp. 96–97.

³⁵ He should have said 'one most general item', as [Elias] notes (*in Isag* xxxiii 29). Perhaps the text should be changed: so David, *in Isag* 152.17–19 (with the alternative suggestion that we 'take the plural for a singular'). According to al-Tayyib, *in Isag* 135, the Syriac translation had the singular.

³⁶ See above, pp. 64; 100–104.

³⁷ See below, pp. 126–128.

³⁸ Note the doubts about the last four of the ten: above, p. 64 n. 46.

‘special’: ‘general’ is found twice (*Top* 101b18; 102a36). Both superlatives are found in Stoic texts; and Diogenes Laertius offers Stoic definitions of them:

Most general is that which, being a genus, has no genus—e.g. something. Most special that which, being a species, has no species—e.g. Socrates. (VII 61)³⁹

It has been supposed that the terms were Stoic inventions; and it has been urged that Porphyry’s use of them is a sign of Stoic influence.⁴⁰ But whether or not they were Stoic concoctions, they had become common property long before Porphyry’s day: ‘most general’ is found a dozen times in Philo of Alexandria, and half a dozen times in Dionysius of Halicarnassus; Galen is fond of it; and it is used by philosophers of every stripe—by the Platonists Eudorus (Arius Didymus, *apud Stobaeus*, *ecl* II 7.2), and Alcinous, *didask* xix [174.11]; by Alexander (e.g. in *Top* 426.4; 444.2–3; in *Met* 205.2–3; 253.26–254.3); by Sextus (*PH* I 39; *M* VII 27). And ‘most special’ is found, as often as not, in the same company. The comparative forms, which the superlatives presuppose, are equally ubiquitous, and so too are the positives from which the comparatives derive.⁴¹

What is more or most general is so relative to some group or category of items. Thus Porphyry will speak of ‘the most general of audible items’ (*in Ptol harm* 8.6–16); Alcinous of the most general odours (*didask* xix [174.11]); and Galen of ‘the three most general faculties of the soul’ (*in Tim* frag 2.64). Lucian will say that ‘the most general forms of dancing are three’ (*salt* 22).⁴² Whether there is anything which is the most

³⁹ For ‘something’ see below, pp. 117–118 (I read ‘τό τι’—see Brunschwig, ‘Supreme genus’, pp. 108–110); for Socrates as a species see Brunschwig, ‘Proper noun’.

⁴⁰ See Additional Note (A).

⁴¹ For ‘more general’ see e.g. in *Ptol harm* 7.8; 81.26; Didymus, *apud in Ptol harm* 28.25; Alexander, in *Top* 277.3; 301.23 (referring to the Stoics); 312.22; 338.7; 456.15; in *Met* 254.1; Clement, *strom* VIII vi 20.1; Plotinus, *enn* VI iii 9.6–7. For ‘more special’ see e.g. in *Ptol harm* 8.17; Philo, *immut* 110; Ptolemy, *tetrab* II i 2; Galen, *diff puls* VIII 625; *loc aff* VIII 113; *soph* XIV 597.—The superlatives sometimes have a noun attached (e.g. in *Cat* 59.21: ‘most general genera’; and probably 5.1–2; Diomedes, *ars gramm* iii [*GL* I 501.16–17]: ‘most general species [*formae* . . . *generalissimae*]’; often it is easy to ‘understand’ a noun; but equally often the adjectives seem to have hardened into nouns, so that I translate ‘most general item’ etc.

⁴² Note also the Stoic theory of the ‘most general’ virtues (e.g. [Plutarch], *epit* 874E; cf Philo, *immut* 95); and the common theory of the most general emotions or *πάθη* (e.g. anon *Lond* II 34–41; [Andronicus], *aff* 1; Clement, *paed* I xiii; Aspasia, *in EN* 42.27–29; 43.13–14). This latter theory is often supposed to be Stoic; but no text associates it exclusively with the Stoics, and the London anonymous ascribes it to ‘the ancients’ as well as to ‘the Stoics’.

general of beings, or the most general item *tout court*, is a question which Porphyry will shortly pose.

Other expressions were also in use. At 5.5 ‘only a species’ and ‘last species’ are synonymous with ‘most special item’. Something is ‘only a species’ if it is a species and not also a genus (see 4.13, 32; 5.1, 5)—and similarly, something is ‘only a genus’ if it is a genus and not also a species (see 4.32–5.1). ‘Last’ or ‘ultimate’ are familiar from Aristotle onwards,⁴³ and so too is ‘first’ to designate a most general item (e.g. *Met* 998b20; 1023a27–28—with Alexander, *in Met* 421.31–33). One item may be ‘before’ or ‘after’ another (e.g. 4.18, 32; 5.2, 6; *in Cat* 83.27, 28, 29; etc); or, equivalently,⁴⁴ ‘above’ or ‘below’ (5.1, 10, 11—very common in Aristotle: e.g. *Cat* 1b22; *Top* 122a4, 7–9, 14–15; 142b11; Bonitz, *Index*, 68b50–57). In the same vein, Aristotle speaks of ‘highest genera’ (e.g. *Met* 998b18); and in Alexander are found ‘the highest and most common genus’ (*in Met* 193.19), and a contrast between ‘highest’, ‘most common’, and ‘first’ on the one hand and ‘last’, ‘proximate’, and ‘individual’ on the other—the three members of each group being treated as synonyms (*ibid* 204.25–30; cf 349.21–22; *in APr* 73.28–29; *in Top* 306.11–12).⁴⁵ Plotinus calls certain items first genera ‘since you will not predicate anything of them in answer to “What is it?”’ (*enn VI* ii 8.43); and he refers to ‘the last species which does not divide into species’ (*ibid* 22.16–17).⁴⁶ The Latins have such things as ‘*ultima species*’ (e.g. Cicero, *orat* iii 10), and ‘*prima genera*’ (e.g. Varro, *ling Lat* V i 13).

Porphyry’s terms ‘superordinate’ and ‘subordinate’ form part of the high–low metaphor, the latter but not the former going back to Aristotle (*Met* 990a6). They are dotted around in later texts—for example, in Galen, *comp med loc* XIII 191, where there is a luxuriant growth of terminology.⁴⁷

The intermediate items are called ‘the middles [$\tau\alpha\mu\epsilon\sigma\alpha$]’ (5.6, 21; 7.15), and are said to be ‘between [$\mu\epsilon\tau\alpha\xi\upsilon$]’ a genus and a species (4.16, 18). The same terminology is found in Alexander (e.g. *in Met* 207.13), and the latter if not the former in Aristotle (e.g. *APr* 43a40–43).

⁴³ See Bonitz, *Index*, 120a58–b4; 289b39–55—note also ‘individual genus’ at *APr* 70b14.

⁴⁴ Note that Boethius translates ‘πρό’ by ‘ante’ at 4.23 and then by ‘supra’ at 5.2.

⁴⁵ But for ‘proximate’ see below, p. 112.

⁴⁶ Also ‘simplest species’ in the sense of ‘lowest’ at Clement, *strom* VIII vi 18.6); ‘genera of genera’ at [Archytas], *opp* 17.29–30 = Simplicius, *in Cat* 392.5–6.

⁴⁷ See also 4.17, 18; 5.12, 18; *in Cat* 73.2; 83.22; 140.4; *in Ptol harm* 6.32; 13.15–19; anon, *in Parm* XIII 10–11, 27–29, 33–34; Plotinus, *enn VI* iii 10.23–27; Alexander, *in Met* 210.19; *in Top* 309.26; Sextus, *PH* I 38; *M* VII 54.

Alexander also notes that that ‘the intermediates must be genera and at the same time species’ (*in Met* 207.22–24)—species of one item and genera of another.⁴⁸ Again, the intermediates are called ‘subaltern genera’ (5.21; 6.1; 7.15).⁴⁹ The locution derives from Aristotle, *Cat* 1b16, where there is a reference to genera which are ‘under one another’, the adverbial phrase ‘ὑπὸ ἀλλήλα’ later coalescing into the adjective ‘ὑπαλλήλος’.⁵⁰ After Aristotle the term is common enough.⁵¹ In his commentary Porphyry explains that to say that X and Y are subaltern or under one another does not mean that X is under Y and Y under X, but rather that either X is under Y or Y is under X (*in Cat* 83.35–84.1).

The variety of this terminology is of no philosophical moment—as Galen says,

it will make no difference if you call them first differences or first genera or most general ideas or anything else which preserves an accurate conception of the thing. (*meth med* X 734–735)

In speaking of most general and most special and intermediate items, Porphyry is not sniffing at Stoicism: he is following a universal trail.

The accounts of these items which Porphyry gives at 4.16–20 return and are augmented at 5.17–23; see pp. 114–115.

The matter may be illustrated by an example—the tree of Porphyry [4.21–32]

Matters will become even clearer, Porphyry says, if we consider a particular kind of predicate; and he chooses the first of Aristotle’s ten kinds—the class of substantial predicates (or the ‘category of substance’ as it is commonly called). A predicate belongs to this class if and only if either it is ‘substance’ or its definition has the form ‘S of such-and-such a sort’, where S belongs to the class of substantial predicates.

⁴⁸ Porphyry expresses the point by saying—in a pseudo-literal translation—that ‘the same items are both genera and species, but taken in relation to another thing and another thing’ (4.19–20): the same formula at 5.22–23; cf *in Cat* 83.33; 107.16–17; Alexander, *in Top* 302.24–27.

⁴⁹ Commentators frequently speak of subaltern genera and subaltern species (e.g. David, *in Isag* 147.3–14). Porphyry does not speak of subaltern species, except perhaps at 5.21–22 (see p. 115 n. 67); but that is scarcely significant.

⁵⁰ Cf e.g. *APr* 54a31–33; *Top* 107a18–23; b19.

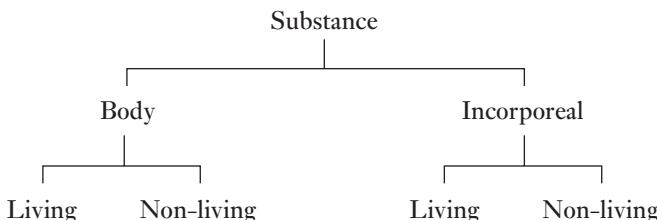
⁵¹ e.g. Alexander, *in Met* 305.18; 384.14, 19; Galen, *diff puls* VIII 633–634.—Note also the use of the term for subaltern propositions: e.g. Alexander, *in APr* 45.23–24; Ammonius, *in Int* 92.22–26.

Aristotle and his followers use the word ‘*oὐσία*’ in two ways, an absolute and a relational: ‘X is an *oὐσία*’ and ‘X is *oὐσία* of Y’. In its latter use the Greek word is often translated as ‘essence’. Men are *oὐσίαι* or substances; being a rational mortal animal is the *oὐσία* or essence of man. The distinction is clear; but in several passages Aristotle appears to muff it—and in any event the relation between substance and essence is intimate. But such intimacies are not to the present point: substances, here, are substances in the absolute use of the word.⁵²

Porphyry does not tell us how to construct a sequence of substantial predicates: rather, he produces one:

Substance—Body—Living body—Animal—Rational animal—Man—Socrates and Plato and the rest

The modern commentators remark that here we have the celebrated ‘tree of Porphyry’.⁵³ It does not look much like a tree: Ammonius calls it a chain (*in Isag* 70.13) and al-Tayyib a line (*in Isag* 171). Modern readers, thinking of family trees, may be inclined to expand Porphyry’s line into a ‘division’, the top of which will look like this:⁵⁴

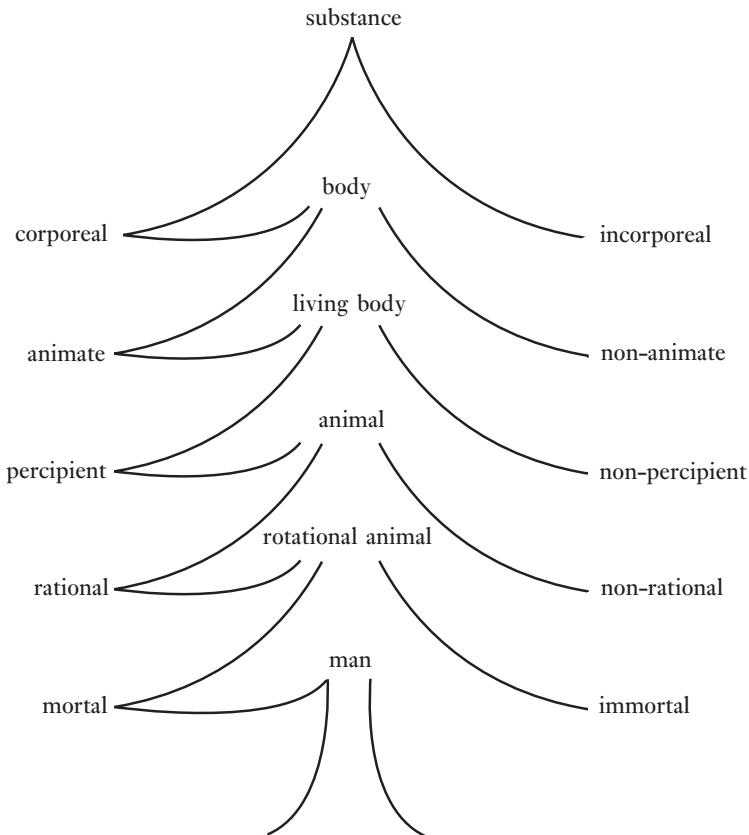


⁵² *Pace* de Libera, *Isagoge**, pp. 47–48, who argues for the translation ‘essence’.

⁵³ So e.g. Evangelou, ‘Aristotle’s doctrine’, p. 30 n. 49; de Libera, *Isagoge**, p. 48. The expression ‘tree of Porphyry’ is not (as far as I have observed) in the Greek commentators; nor in Boethius (but note *in Isag* 78.9–11: ‘When you descend from the more general to the more special, every unity of higher genera will be separated into numerous and branching [*multifidas ramosaque*] species’—Warren, *Isagoge**, p. 35 n. 30, thinks that this phrase may have suggested the idea of a tree.) The earliest explicit tree which I have found is in [Sergius]: ‘So let Your Excellency imagine a tree: a trunk which divides into two or more boughs, every bough dividing into branches, every branch into twigs, every twig into shoots’ (Furlani, ‘Sergio’, p. 39). But this is not the traditional tree of Porphyry.

⁵⁴ So e.g. Stump, *Boethius*, pp. 240–241. For the genuine tree see Mansfeld, *Heresiography*, p. 98; de Libera, *Querelle*, p. 46.

Not that this is particularly arboreal. (Or are we supposed to recall Aristotle's thesis that a plant's roots are really its top?) In any event, Porphyry's tree was not so pictured. Rather, it was drawn as follows:



Very like a pine, my Lord.

In any event, nothing in Porphyry's text insinuates a diagram, let alone a tree diagram.

Porphyry's example⁵⁵ was controversial at two points. First, in *On Abstinence*, Porphyry himself argues that all animals are rational,

⁵⁵ The example reappears at *in Cat* 83.18–34; and it is found earlier, e.g. at Seneca, *ep* lxviii 11; see Mansfeld, *Heresiography*, pp. 96–99; Dörrie and Baltes, *Platonismus* IV, pp. 310–319.

expressly rejecting the division of animals into the rational and the non-rational (*abst* III 21-23). True, this comes in a long passage which Porphyry copied almost word for word from Plutarch (*sollert anim* 959F-963F); but he copied the passage because he agreed with it.

Secondly, although the division of substance into corporeal and non-corporeal was a stock one⁵⁶ (it has been adumbrated at 1.11), the commentators notice that, according to Plotinus, no genus can straddle both the intelligible (or incorporeal) and the perceptible (or corporeal).⁵⁷ This view was accepted by Porphyry himself: 'for body and incorporeal there is no common genus' (*in Cat* 106.26-27). Indeed—but for different reasons—the view is Aristotelian:

Sometimes people place a whole in its part without realizing it—saying e.g. an animal is an animate body. But a part is not predicated of a whole, so that body, being a part, is not a genus of animal. (*Top* 126a26-29)

Alexander repeats the point (*An* 14.11-17)—though he allows that body is the genus of the four corporeal elements (*in Met* 383.28; cf *in Top* 506.18).

Substance is the most general item in the tree, and man the most special. Porphyry also notes expressly, of each contiguous pair in the chain, that the upper is a genus of the lower and the lower a species of the upper. He does not say that substance is a genus of, say, animal, nor that man is a species of, say, body; but it is tempting to suppose that the relations '... is a genus of —' and '... is a species of —' are transitive: 5.6-15 suggests as much, and so does *in Cat* 83.21-22 (note the example at 83.30).⁵⁸

The relations '... is a genus of —' and '... is a species of —' are new, and need defining. Plainly, X is a genus of Y if and only if X

⁵⁶ e.g. Philo, *agric* 139; Seneca, *ep* lxviii 11; Sextus, *PH* II 223; Clement, *strom* VIII vi 20.2. Later e.g. Boethius *div* 884p; scholia to Dionysius Thrax, *GG* I iii 115.27-28. According to David, 'Aristotle says: Substance divides into body and incorporeal' (*in Isag* 149.11-14). The quotation is fraudulent.

⁵⁷ So e.g. anon, *in Isag* IV 209-213, referring to Plotinus, *enn* VI i 1 (the objection was taken from Nicostratus: Simplicius, *in Cat* 76.13-17); cf e.g. Dexippus, *in Cat* 40.13-41.3; Iamblichus, *apud Simplicius*, *in Cat* 141.27-19; Simplicius, *in Cat* 83.20-29 (contrast 141.29-31). For the principle involved—no genus of an ordered series—see below, pp. 332-336. On the issue over corporeal and incorporeal substance see P. Hadot, 'Harmonie'.

⁵⁸ At 4.31-32, man is said to be 'not a genus of particular men—only a species'. Does Porphyry mean '... only a species of particular men' or '... only a species, and not a genus of anything'? The former construal is perhaps easier on the Greek (so e.g. Boethius, *in Isag*² 210.12-14).

is predicated generally of Y. Equally plainly, it is not the case that X is a species of Y if and only if X is predicated specially of Y. Rather, X is a species of Y if and only if Y is a genus of X; that is to say, if and only if Y is predicated generally of X.

Most general, most special, and intermediate items stand in certain relations to one another. [4.32–5.16]

The paragraph adds little of substance; but it warrants a few notes.

The term ‘προσεχές [proximate]’ at 4.32⁵⁹ (and again at 7.3) is technical:

Since one genus is its proximate genus (that is what they call a genus which has no intermediates) whereas others have one or two intermediates and another is the highest of all, there is considerable discussion as to which genus should be placed first of all in a definition—the highest (after which there is nothing more general), or the proximate, or perhaps one of the intermediates (when it is clearer than either of the others)? (Galen, *diff puls* VIII 734)

X and Y are proximate if and only if there is nothing intermediate between them.⁶⁰

At 5.3 ‘split [τέμνεσθαι]’ is used in the sense of ‘divide’; so too at 10.10; 14.19 (cf. ‘τομή’ at 7.2—and the frequent use of ‘ἀτομος’ for individuals⁶¹). The word is common in Plato (e.g. *Soph* 219E; 221B, E—and ‘ἀτομος’ of species at 229D, ‘ἀτμητος’ at *Phdr* 277B). It is not found in the logical sense in Aristotle (who, however, uses ‘ἀτομος’); but the later tradition likes it well enough (e.g. in *Ptol harm* 112.25; Galen, *diff puls* VIII 602; *ad Glauc* XI 3–4 [below, p. 130]): it is a stylistic variant for ‘διαιρεῖν’. X splits into A, B, C, . . . if and only if of anything of which X is true, exactly one of A, B, C, . . . is true.⁶²

⁵⁹ I read ‘προσεχές ἔστι’, after Boethius and the other ancient translations, rather than ‘προσεχῶς κατηγορούμενον’ with the Greek MSS: no difference in sense; but the Greek runs better.—At 5.1–2 the syntax of the Greek is ambiguous: I suppose that the clause ‘τῷ μηδὲν εἶναι . . .’ stops at ‘γένος’ and goes with what precedes—other construals are possible.

⁶⁰ For the term see also e.g. in *Ptol harm* 13.16; Diogenes Laertius, VII 61; Sextus, *M* XI 15; Alexander, in *Met* 177.31–178.2; in *Top* 302.23; 303.3; in Latin ‘proximus’, e.g. Martianus Capella, IV 344; Boethius, *div* 884C.

⁶¹ See above, p. 78.

⁶² At 5.3 there are two textual points. (i) ‘. . . there is no other species’: the word ‘other’ is omitted by most MSS; but Boethius has it, and the Greek runs better with it. (ii) For ‘. . . anything which can be split’, the Greek MSS have ‘. . . anything which can be split into species’. What is split into species is a genus; thus the MSS have Porphyry

At 5.4 the Greek manuscripts add a third item after ‘Socrates and Plato are individuals’, namely ‘and this white thing here [*καὶ τούτη τὸ λευκόν*]’ (cf 4.3–4). This is inept. Boethius does not translate the words, and they should be omitted.

At 5.10, the received text means ‘being the genus which is the highest of all genera’: true but not pertinent—excise ‘the highest [*τὸ ἀνωτάτω*]’ and the text is impeccable.⁶³

Intermediates stand in two relations; for X is an intermediate if and only if there is something of which it is a genus and also something of which it is a species (5.7–9). The ‘extremes’, or non-intermediates, stand each in one of these relations (5.9). For X is most general if and only if it is a genus of something and not a species of anything. Equally, X is most special if and only if it is a species of something and not a genus of anything—or that is what Porphyry starts to say at 5.13, where ‘a single relation’ picks up the same formula at 5.9. But then the text, as Busse prints it, introduces a second relation, the relation between a most special item and the individuals which fall under it, and it says that a most special item is a species for its individuals. It is true that there is a difference between most general items and most special: the most general have nothing whatever above them, whereas the most special have individuals below them. Hence most special items have relations in two directions, and evidently two different relations.⁶⁴

Busse’s text says this: The most special items, like the most general, have just one relation (5.13); and although this relation has two aspects, or is held towards two items or groups of item (5.13–14: *τὴν μὲν . . . τὴν δὲ . . .*), it is not a different relation in the two cases (5.14)—although in the one case it is a matter or being contained and in the other of containing (5.15–16).

This is incoherent. David says that some people criticize Porphyry for ascribing only one relation to most special items, namely the ‘upward’ one (*in Isag* 153.17–24): these people were either purblind or else they

saying: ‘After X, there are no species, nor indeed any genera’. That is upside-down—with Boethius I omit ‘into species’.—At 5.4 you might expect a nominative for the genitive ‘*τῶν ἀτόμων*’.

⁶³ At 5.11–12 Boethius’ translation and the Armenian (Sgarbi, ‘Osservazioni’, p. 405) omit ‘*ὡς*’—and also the whole clause ‘and, as we have said, . . . genus’. In the first case, they are probably correct; and it is tempting to follow them in the second case too.

⁶⁴ So e.g. Ammonius, *in Isag* 80.9–12; Philoponus, *in Isag* 205.22–26; rejected by e.g. Arethas, *in Isag* 43.22–44.15 (with rotten arguments).

read a different text from Busse's. Delete three words from Busse: first, 'μέν' at 5.13—Boethius does not translate it, and some Greek manuscripts do not show it; secondly, 'ἀλλοίαν' at 5.14—the word is missing from some of the MSS of Boethius' translation, and both Ammonius (*in Isag* 80.1–3) and Boethius imply its absence (*in Isag*² 213.21–22); thirdly, the second 'λέγεται' at 5.15—not in Boethius, nor in some of the Greek manuscripts. The result may be paraphrased thus: 'The most special items have one relation—the relation upwards and not the relation downwards. "But surely they are also species of the items below them?" Yes; but not in the pertinent sense.' This is how David's critics understood the text; and it is surely how Porphyry wrote it.

'Contain' at 5 translates 'περιέχειν': the verb occurs in *Isag* first at 2.13, and then more than a dozen times; Porphyry also uses 'περιοχή' (15.22) and 'περιεκτικός' (13.23). And frequently elsewhere—thus:

One thing is in something as a species in a genus—e.g. man in animal; for the species is contained by the genus. (*in Cat* 77.27–28; cf 84.17–20; 90.4–11)

This logical use of the term, which is connected with the vocabulary of parts and wholes,⁶⁵ is ubiquitous in the later texts; it is common in Aristotle (e.g. *Top* 121b26; 140a2; *Phys* 195a29–32; *Met* 1023a14–17—with Alexander, *in Met* 421.5–7; see Bonitz, *Index* 581a37–51); and it is known from Plato (e.g. *Soph* 250BD, 253D; *Parm* 138AB, 145B). Several texts give the impression that X contains Y if and only if X is true of everything of which Y is true. But the word 'contain' suggests an asymmetric relation, thus:

X contains Y if and only if (i) X is true of everything of which Y is true, and (ii) Y is not true of everything of which X is true.

The old masters offer accounts of these items. [5.17–6.1]

There are two accounts of the most general, and three of the most special. (Their status is left open by Porphyry's verb, 'demarcate [ἀφορίζειν]'.⁶⁶) Thus:

⁶⁵ See below, pp. 148–150.

⁶⁶ For which see above, p. 57—Ammonius paraphrases with 'they delineate': *in Isag* 80.15.

- (G1) That which, being a genus, is not a species.
- (G2) That above which there is no other superordinate genus.
- (S1) That which, being a species, is not a genus.
- (S3) That which, being a species, we shall not again divide into species.
- (S4) That which is predicated, in answer to 'What is it?', of several items which differ in number alone.

Porphyry does not repeat the account which he gave at 4.17-18, namely:

- (S2) That below which there is no other subordinate species.

He might have thought up a companion to (S3), say:

- (G3) That which, being a genus, is not the result of the division of a genus.

There is no companion to (S4) for genera.

(G1) is very close to the Stoic definition (Diogenes Laertius, VII 60—above p. 64). (G2) was introduced at 4.16-17, and probably repeated at 5.12. It is also found, for example, at *in Cat* 72.35-73.1. The two accounts are equivalent. (S1), like (G1), is close to the Stoic account. (S2) is trivially equivalent to (S1). (S3) is familiar from 4.11-12—where it was first introduced as an account of species.⁶⁷

There is a plurality of highest genera. [6.1-6]

The paragraph touches on matters which surely 'demand another and a larger investigation' (1.13-14).⁶⁸ It is introduced in a baffling fashion. No doubt the sequence

⁶⁷ At 5.21 Busse proposes to add 'καὶ γένη' so that Porphyry says that 'they call them subaltern genera and genera and species'. He appeals to 6.1 (where Tricot, *Isagoge**, p. 21 n. 1, deletes the words 'γένη τε'), and to Boethius and Ammonius and Elias. But according to Minio-Paluello, Boethius' translation follows the text of our Greek MSS. And Ammonius gives no sign of having read Busse's proposed text (but his comments at *in Isag* 78.6 and 80.18 suggest that perhaps he read 'καὶ' before 'γένη' in 5.21 and did not have 'γένη' at 6.1—he takes the terms 'ὑπάλληλα' as a noun, not as an adjective with 'γένη'). In any event the textual decision has no doctrinal import.—Does 'subaltern genera and species' mean 'subaltern (genera and species)' or rather '(subaltern genera) and species'? 6.1 perhaps favours the latter option.—At 5.23 Busse changes 'δέ' to 'δή', which he claims to find in Elias. In one lemma Elias has 'δέ' (*in Isag* 67.3) and in another 'δή' (70.2).

⁶⁸ 'Thus whatever we may say, there is certainly a general metaphysical side to the *Introduction*' (de Libera, *Isagoge**, p. xiii n. 2). De Libera also states that 'until the *Metaphysics* was translated, this short passage of Porphyry directed all mediaeval reflexion on ontology' (*ibid.*, p. 52).

man, animal, . . . , substance

is similar in some ways to the genealogical sequence

Agamemnon, Atreus, . . . , Zeus

But the received text, if it can be construed at all, insinuates a particular similarity—that the terminology of genera and species and subaltern genera is applied to family trees. I suppose that a line has dropped out of the text.

However that may be, it is a point of dissimilarity which Porphyry wishes to stress: whereas all genealogies go back to a single first ancestor, there is no genus which is the single first genus of everything. The text at 6.3–4 is difficult, and probably corrupt,⁶⁹ moreover, Porphyry's remark about genealogies is formally ambiguous between:

(1) In every genealogy there is an ancestor who is the first element,

and

(2) There is an ancestor who is the first element in every genealogy.

(1) sounds plausible, (2) wildly implausible. But Porphyry's argument demands (2). He is perhaps thinking of the Orphic lines which make Zeus the origin of all things.⁷⁰

There is no ancestral Zeus for all things, no Jovian genus. Some commentators say that Porphyry has Plato in his sights: 'he now attacks Plato, who says that what exists is a genus of all things' (Arethas, *in Isag* 49.14; cf e.g. David, *in Isag* 158.2–159.9)—Arethas is thinking of the *Sophist*, where being is one of the five 'greatest genera'. And his interpretation was scarcely heterodox. Thus Seneca, purporting to offer an account of what Plato had said about what exists,⁷¹ first tracks down

⁶⁹ At 6.4 'τὴν ἀρχὴν ὡς ἐπὶ τὸ πλεῖστον' cannot be taken together (*pace* e.g. David, *in Isag* 157.10–12). Rather 'τὴν ἀρχὴν' must be in apposition to 'τὸν Δία'; and 'ὡς ἐπὶ τὸ πλεῖστον' must modify the verb and indicate that most genealogists trace things back to one source. Boethius (*plerumque ad unum reducuntur principium verbi gratia Iovem*) cannot have read our Greek text—nor can al-Tayyib, *in Isag* 143 and 165. (But in any event 'τὴν ἀρχὴν' must be preserved, for it refers back to the second sense of 'genus' noted at 1.23–2.5.)

⁷⁰ Cited at *de imag* 354 = Eusebius, *PE* III ix 1–2. The commentators refer rather to the Homeric tag 'Zeus, father of gods and of men' (*Iliad* I 544—e.g. Ammonius, *in Isag* 81.10). Perhaps there is an allusion to the opening lines of Aratus (cited by Paul, *Acts* xvii 28)? And I guess that Porphyry also has in his head Plato, *Alc* I 120E–121A.—Note also Plotinus, *enn* III i 2.17–19: 'Some go to the origin of everything and derive [κατάγοντες] cf 2.6] everything from it'.

⁷¹ On the passage see Brunschwig, 'Supreme genus', pp. 110–115; Dörrie and Baltes, *Platonismus* IV, pp. 291–297.

that genus on which the other species depend, from which all division starts, and in which everything is contained. (*ep* lviii 8)

This, he argues, was taken to be that which exists—*quod est* or $\tau\ddot{o}\ \ddot{o}v$ (*ibid* 11).

So this genus is first and oldest and, if I may so put it, general—the others are indeed genera, but special genera. . . . This general genus, what exists, has nothing above it; it is the starting-point of things; everything is under it. (*ibid* 12)

Similarly Alexander:

For it results that some of the items which are predicated in common of certain items cannot be genera of the items of which they are predicated in common—among them, items said in several senses. Aristotle is thinking in particular of existents, which they [the Platonists] take as a sort of common genus for what exists and fabricate a form of existing-itself and one-itself to which everything is reduced. (*in Met* 126.31–35)⁷²

Modern scholars think that it was not Plato but rather the Stoics whom Porphyry had in mind—he was implicitly rejecting the Stoic thesis that ‘something [$\tau\iota$]’ is the genus of everything.⁷³ The passage from Seneca which I have just cited continues thus:

But the Stoics want to place another genus, yet more primary, above it. (*ibid* 13)

And later Seneca adds that

certain Stoics think that the first genus is something [*quid*]. (*ibid* 15)

The Stoic doctrine is well-attested; and it was sufficiently familiar for Philo to play on it:

Souls who have drunk the manna are filled with what is most general (for the manna is called something [$\tau\iota$], which is the genus of everything), and the most general item is God, and secondly the reason of God . . . (*leg alleg* ii 86)⁷⁴

There are three theses to be distinguished here:

⁷² Reading ‘ $\ddot{o}v\tau\omega\nu$ ’ for ‘ $\ddot{o}\lambda\omega\nu$ ’ at line 34; cf *ibid* 124.20–125.4.

⁷³ So e.g. de Libera, *Isagoge**, p. xiii n. 22.

⁷⁴ For the Stoic theory see also e.g. Diogenes Laertius, VII 60 (above, p. 106); Sextus, *PH* II 86, 223; Alexander, in *Top* 301.19–27; 359.12–16—other texts in Hülser, *Dialektrik*, pp. 846–858.—The Platonist Severus took *Tim* 27D to show that Plato construed $\tau\iota$ as the genus of $\ddot{o}v$ and $\gamma\iota\gamma\nu\acute{o}\mu\epsilon\nu\sigma$ (Proclus, in *Tim* I 227.13–17).

- (1) 'Being' or 'existent' is a general term; or existence is a genus.
- (2) There is some one genus of which all other genera are species or subspecies: there is a single supreme genus.
- (3) 'Being' or 'existent' is a supremely general term: existence is a supreme genus.

The first thesis was advanced by Plato and also by the Stoics.⁷⁵ The second thesis has sometimes been ascribed to the Platonists and often to the Stoics.⁷⁶ The third thesis is also sometimes given to Platonism. It is not Stoic.

6.4–5 and the genealogical comparison demonstrate that Porphyry rejects (2). 6.5–6 reject successively (2) and (3).⁷⁷ As for (1), Porphyry does not expressly consider it; but 6.8–10 implicitly rejects it. Why did Porphyry reject these theses? Plotinus, referring to the Stoics, had claimed that

against those who posit four <genera of beings> . . . and posit some common item over them and contain all things in one genus, much might be said. (*enn VI i 25.1–5*)

Plotinus goes on to indicate three objections to the Stoic theory: first, their 'something' is incomprehensible and unnamable; secondly, the Stoics can supply no differences by which the alleged genus of something might be divided into species; and thirdly, the something itself can be neither existent nor non-existent. Plotinus adds that there are 'tens of thousands of other things' which he might say but will leave aside. So Porphyry had a wide choice of arguments.

On the basis of 6.5–6 ('the existent is not a single genus . . . as Aristotle says'), the commentators look to Aristotle for Porphyry's arguments. Aristotle rejects thesis (2) in the *Sophistici Elenchi*:

Everything is not in some single genus, nor, if it were, could things which exist fall under the same principles. (172a13–15)

⁷⁵ Victorinus ascribes it to 'the Greeks' (*in rhet Cic I 22* [211.25–26]; cf I 28 [228.32–34]. At *def 12.15–20* he himself appears to take *ens* as a genus; and at *ad Cand xiv–xv* he urges that *τὸ ὅν* is a general genus—although it is topped by *τὸ προόν*.

⁷⁶ But 'something' is not a supreme genus for everything; for in addition to somethings there are nothings (*οὐτίνα*), and there is no genus common to somethings and nothings: see Brunschwig, 'Supreme genus', pp. 103–104.—I add a peach: 'There is a work of Aristotle's, called *Phaedo*, in which he says that a single genus embraces all ten categories' (anon. Syr, *in Isag 237.44–238.2*).

⁷⁷ In 6.5 it is tempting to omit 'τὸ ὅν' (which may have come in from 6.9). At 6.6, I have changed 'τὸ ἀνωτάτω' to 'τι ἀνωτάτω'.

Although he holds that existence is predicated of everything,⁷⁸ and although he sometimes speaks as if existents formed a genus,⁷⁹ he formally rejects thesis (1):

To exist is not the substance of anything—for what exists is not a genus. (*APst* 92b12–13)

Or again:

Neither are genera natures and separable substances of other items, nor can unity be a genus (for the same reasons for which neither existence nor substance can be). (*Met* 1053b21–24)

The reasons to which the last text refers are to be found in the *Topics*⁸⁰—and also, more famously, in an earlier book of the *Metaphysics*:

It is not possible that there is a single genus of existents—neither unity nor existence. For the differences of each genus must both exist and each of them be one; but it is impossible to predicate either the species of a genus of their own differences or a genus without its species, so that if unity or existence is a genus, no difference will exist or be one. (*ibid* 998b22–27)

Perhaps Porphyry is thinking of this passage and of this particular Aristotelian argument;⁸¹ but 6.5–6 surely alludes to a familiar doctrine rather than to a text or to an argument.

If a Porphyrean argument is wanted, then it is best to look at 6.8–11. There Porphyry remarks that you may call everything existent, if you like; but in that case you will be speaking homonymously not synonymously. To be sure, if existents formed one common genus, then everything would exist in the same sense—but ‘exist’ is not like that.

⁷⁸ e.g. *Top* 121a10–19, b6; *Met* 1040b16–24; 1045b1–7—hence existence cannot be a difference, or differentiating feature, of anything; and ‘man’, ‘one man’, and ‘existent man’ are equivalent (*Met* 1003b26–29).

⁷⁹ See e.g. *Met* 1004a5; 1005a34: Alexander more than once feels obliged to point out that Aristotle uses the term ‘genus’ in a loose sense: *in Met* 245.3, 29–30; 249.28–30.

⁸⁰ See *Top* 127a26–34, where Aristotle argues that ‘what follows everything’—for example, existing and being one—is neither a genus nor a difference. The latter point is an evidence. For the former, Aristotle’s reasoning is frail: Alexander, in some embarrassment, decides that the argument is directed against someone who ‘presents what follows everything as a genus of something simply because it so follows’ (*in Top* 358.11–12; cf Boethius, *in Isag* 223.24–224.17).—Again, at 140a24–32, Aristotle remarks that since a genus is what distinguishes one group of items from another (cf 2.9–10: above, p. 56), then what applies to everything cannot be a genus. (See Sainati, *Storia dell’Organon*, pp. 105–109.) The function of distinguishing one group from another is not included in the definition or delineation of what a genus is: it is a consequence of, rather than an argument for, the non-existence of any single supreme genus.

⁸¹ On which see Additional Note (F).

This is not presented as an argument against thesis (1); but it can be rearranged into one, thus:

If existents form a genus, then all existents exist synonymously.
But existents exist homonymously.
Hence existents do not form a genus.

In his commentary on the *Physics*, Porphyry ascribed this argument to Aristotle:

He says that existent items are not existent in the same way—and that existence is therefore not a genus of them. (*in Phys* 129 = Simplicius, *in Phys* 94.6–7)⁸²

The argument is used more than once by Alexander—for example:

Existent is not predicated of substances as a genus, nor unity of existent; for existence and unity are homonyms. (*in APr* 292.36–293.1)

And there is something close to it in Dexippus.⁸³

There is an Aristotelian principle behind the argument: if Fs form a genus, then Fs are so called synonymously.

Every genus is predicated of its species synonymously; for the species take both the name and the definition of the genus. (*Top* 109b5–7)⁸⁴

Here ‘synonymously’—and its partner ‘homonymously’—should be understood according to the *Categories*:

Items are called homonymous if they have a name alone in common, the account of their substance which corresponds to the name being different . . . Items are called synonymous when the name is common and the account is the same. (1a1–11)⁸⁵

⁸² See below, p. 122.—For *in Phys* see Moraux, ‘Porphyre commentateur’. The work appears to have consisted of a commentary on *Phys* I–IV followed by a synopsis of V–VIII.

⁸³ See *in Cat* 11.30–12.1; for Alexander see also *in Top* 137.11–14; 360.15–16; *in Met* 249.29–31.

⁸⁴ Cf *Top* 127b5–7, with Alexander, *in Top* 313.21–23; cf e.g. Alexander, *in Met* 241.10–12; 243.31–32; Boethius, *in Int²* 119.16–17; *in Cat* 160c; Simplicius, *in Cat* 220.8–9.

⁸⁵ At 6.10–11 Porphyry uses the formula ‘the account which corresponds to the name’ rather than ‘the account of their substance which corresponds to the name’: Aristotle uses the shorter formula at *Top* 107a20 and 148a24–25—so perhaps Porphyry here has his mind on *Top* rather than on *Cat?* (Bodéüs, *Catégories*, p. 253, thinks that the shorter formula should be printed in *Cat* too; but Porphyry’s text is known to have had the longer

Two items are homonymous when there is some single term which is true of each of them but no single account of the term is true of each. Two items are synonymous when they share a single term and also share its account. The Cobb at Lyme and the killer of William III are homonymous: of each the word 'mole' is true, but in different senses—'mole' is predicated of them homonymously. On the other hand, the regicidal rodent and the beast which has just thrown up another miniature slag-heap on my lawn are synonymous: each is called 'mole' in the same sense, 'mole' is predicated of them synonymously.

The set of items which consists of jetties and little gentlemen in velvet is not a genus; for although 'mole' is predicated of all its members, it is so predicated homonymously. Not that homonyms never find their way into a genus—after all, pretty well every item is homonymous with some item or other in respect of some name or other. Indeed, a pair of homonyms may be in the same genus in virtue of their very homonymy—the dog and the dogfish (both called by the same term in Greek, and a standing example of homonymy) are both in the genus of animal. Again, a term which is predicated homonymously can nonetheless be predicated generally—'dog', despite its ambiguity, is a general term (in at least one of its senses). Rather, the point is this. If X is predicated generally of Y and also of Z, it does not follow that Y and Z belong to the same genus: they will be so only if X is predicated of them in the same sense. If X is predicated generally of Y and also of Z and if Y and Z are cogeneric (with respect to X), then Y and Z are synonyms (with respect to X).

Thus homonyms are in genera (as Aristotle of course allows); and homonymous terms may be general predicates (although Aristotle does not say so); but the set of items of which a homonymous term is predicated do not by that fact alone form a genus.

Homonyms do not, in this way, form a genus. Existents are homonyms. Hence existents do not form a genus. At 6.8 Porphyry ascribes the second premiss of this argument to Aristotle.⁸⁶ It has been claimed that he thereby traduces Aristotle. Aristotle did not think that existents are homonyms: rather, he thought that items are called

formula.) Hardly—and he will have seen no more difference between *Cat* and *Top* than Alexander had done. (At *in Top* 97.25–98.1 Alexander uses the shorter formula in his own person and then cites the longer formula from *Cat* as a gloss on it.) At *Top* 109b6–7 and 162b37—and also at *Cat* 3b8—Aristotle has an even shorter formula: 'their account'. The various passages all convey the same idea, which they express with different degrees of pedantry.

⁸⁶ See also *in Cat* 61.10: 'Aristotle takes existents to be homonyms'.

existent ‘in virtue of a relation to some one thing’—in virtue of ‘focal meaning’.⁸⁷ After all,

existents are so called in many ways—but in relation to a single item and one nature, not homonymously. (*Met* 1003a33–34)

Or:

‘exist’ holds of all items, but not in the same way: rather of some primarily and of others consequentially. (*ibid* 1030a21–22)

A spa town and a ruddy complexion are each called healthy: not in the same sense of ‘healthy’ but in interconnected senses inasmuch as in each case ‘healthy’ is defined by reference to some single nature, namely health. Sparrowhawks exist, and so does surliness: not in the same sense of ‘exist’—rather, sparrowhawks exist in the primary sense, and surliness in a consequential sense. So existents are not homonymous items. Rather, as Alexander puts it, they are ‘between’ homonyms and synonyms, neither one thing nor the other.⁸⁸

The issue was discussed by Porphyry in his commentary on *Physics* 185b25–186a3. Simplicius reports Porphyry’s ‘novel’ interpretation of this text, partly in summary form and partly in direct quotation (see *in Phys* 92.26–28). The quotation includes the following paragraph:

Aristotle was the only philosopher who saw how this serious puzzle should be solved. For he says that existent items are not existent in the same way—and that existence is therefore not a genus of them. Rather, some existents are such as to be able to subsist by themselves and in their own right, showing a proper character of their own, whereas others, although they are indeed existent, do not partake in existence in the same way—but rather in a different way, by existing in subsistent items and depending on them for their existence. Thus fathers and sons, masters and slaves, exist by chance. Hence he said that items are existents in several senses—the rest are accidents of substances, by which underlying subjects are characterized. (*in Phys* 129 = Simplicius, *in Phys* 94.5–13)

And a few lines later Porphyry adds:

Existents are homonymous not in the way of chance homonyms but rather in the way of homonyms which depend on some one item. (*ibid*, 94.28–29)

⁸⁷ So Elias, *in Isag* 70.18–21 (cited with praise by de Libera, *Isagoge**, p. 51); David, in *Isag* 155.13–18 (but note 157.14–17); anon in *Isag* IV 262–268.

⁸⁸ See in *Met* 241.5–9 (relying on *Met* 1003a33; cf 1030a34–b3); cf e.g. Simplicius, *in Cat* 74.30–31.—The later commentators are then able to reconcile Plato and Aristotle: inasmuch as existents are not homonymous, Plato is right to make existence a genus, and inasmuch as they are not synonymous, Aristotle is right to say that it is not a genus (e.g. David, in *Isag* 158.24–159.7).

That is to say, he is aware of Aristotle's view of the 'focal meaning' of existence.

Elsewhere he shows himself aware of Alexander's position; for he knows that

some people do not count <items having focal meaning> among homonyms, nor yet among synonyms—rather, they place them in between homonyms and synonyms. (in *Cat* 66.17–18)

But he himself makes such items the third and the fourth kind of homonym (ibid 66.2–15; cf 65.18–20).⁸⁹ And he is right: despite what Aristotle says at *Met* 1003a33, items with focal meaning are homonymous according to the account of homonymy given in the *Categories*.⁹⁰

The term 'existent' is true of everything, but not synonymously. Hence existence is not a genus of everything of which 'existent' is true—and *a fortiori* not a supreme genus. And if nothing is predicated synonymously of everything, then there is no supreme genus at all.

Why think that no term is predicated synonymously of everything? Is not 'thing' or 'item' so predicated? (That, presumably, was the Stoic view of the matter, their 'something' or 'τι' answering to 'thing' or 'item'.) Is 'item', or 'curious item', used in different senses in the sentences 'Dodos are curious items' and 'Imaginary numbers are curious items'? And how are the answers to such questions to be determined?

Again, why think that general terms must be entirely innocent of homonymy? Aristotle thought that focal items constitute, if not a genus, then at any rate a unitary group—a group unitary enough to fall under the purview of a single science. Defending Aristotle against the Platonist Nicostratus, Porphyry urged that good and bad are genera; to be sure, good things are homonymous so that they do not strictly fall under a single genus; nevertheless,

⁸⁹ So too e.g. Boethius, in *Cat* 166B.

⁹⁰ Simplicius also noted that some commentators wanted to place focal items between homonyms and synonyms (in *Cat* 32.13–19); but he remarked that 'a book is medical because it contains a written account of medical learning, a knife is medical because it is an instrument for cutting according to the art of medicine, and a drug is medical because it is useful for curing, so that the name is the same and the account in each case different' (ibid 32.5–8). That is to say, medical items, the very paradigm of focal things, satisfy the Aristotelian definition of homonyms.—Tricot, *Isagoge**, p. 22 n. 1, rightly says that focal items are a special case of homonyms (a case he erroneously identifies with items spoken of 'by analogy'); and he adds that 'Porphyry does not take his analysis far enough', a judgement which may be thought excessive given that *Isag* is an elementary introduction.—Shields, *Order in Multiplicity*, pp. 14–22, also urges that focal items are homonyms; but he denies (pp. 22–24) that *Met* 1003a33 goes against this.

because genera are like homonyms which derive from some single item, he calls them genera. (*ad Gedal* 74 = Simplicius, *in Cat* 415.3–4)

Porphyry allows Aristotle an off-colour use of ‘genus’.⁹¹

Why not go further? why not allow moles to form a genus despite the ambiguity of the term? (Why not take ‘item of which the term “mole” is true’ to be a general term?) At bottom, the prohibition on homonymous genera is similar to the prohibition on disjunctive genera.⁹² ‘Chalk or cheese’ is an intelligible term: it is not unclear, and it is not ambiguous—it is true of something if and only if either that thing is chalk or it is cheese. But ‘chalk or cheese’ is not a general term, chalk and cheese do not together constitute a genus of stuffs. Why not? Because there are no universal scientific truths about chalk or cheese—or rather, none about them *qua* chalk or cheese.

The most general items are ten in number. [6.6–11]

The ten most general items are Aristotle’s ten types of predication—the ten ‘categories’. Ammonius says that Porphyry ‘supposes’ the ten (*κείσθω*: 6.6) because a proof of their existence would require a deeper investigation—and he adds that a proof is given in the *Categories*. (See *in Isag* 84.2–5.) It might be urged that Porphyry is not supposing rather than proving: he is supposing rather than affirming. But in his commentary on the *Categories* Porphyry defends the Aristotelian decad, and by 6.11 the ten seem to be fixed.⁹³

Porphyry construes the Aristotelian predications as genera, and as highest genera. And so they are usually construed, without fuss, in the tradition—both ancient and modern.⁹⁴ Nor is this surprising. Aristotle not infrequently speaks of them as genera—thus:

⁹¹ Compare e.g. Alexander, *in Top* 292.26–27: ‘Since κίνησις is said in many ways, we must divide and consider the species of κίνησις’—difference in sense generates different species. (But at 303.19 Alexander says that these kinds of motion are *εἰδη* only in a generous sense, *κοινότερον*.)

⁹² On which see Alexander, *in Top* 462.10–15.

⁹³ 6.6–7 must mean ‘Let us suppose that there are *ten* most general items’. The Greek word order is difficult: perhaps read ‘γένη δέκα’ for ‘δέκα γένη’? Again, the clause beginning with ‘οἶλον’ is dark. De Libera translates: ‘as playing the part of ten first principles’. But ‘ἀρχή’ alludes to the genealogical ‘ἀρχή’ at 6.4.

⁹⁴ e.g. in *Ptol harm* 60.21; Alexander, *in APr* 4.16–18; *apud Simplicius, in Cat* 10.15–17; Boethius, *in Isag* 2.143.20–144.1; *in Cat* 178A (‘The meaning of the ten predications shows nothing other than the ten genera of things which we call most general’); [Alexander], *in Met* 474.37–40.

First, no doubt, it is necessary to determine in what genus a thing is and what it is—I mean whether it is a this such-and-such or a qualified item or a quantified or any of the other predications we have distinguished. (*An* 402a22–25)

Discovering what something is, i.e. what genus it belongs to, is a matter of (first) associating it with the right type of predication.⁹⁵ And if the types are genera they are evidently highest genera, inasmuch as there are no genera above them.

There were voices raised—or half raised—against this construal. Qualities, according to *Cat* 8b25–26, are homonymous items: ‘quality is among things so called in many ways’. But homonymous items do not form a genus: hence quality, not being a genus at all, is not a highest genus. Simplicius considers the point at length. He thinks that since the very next sentence begins ‘Now, one species of quality . . .’,⁹⁶ Aristotle cannot refer to homonymy when he says that quality is ‘so called in many ways’: he means that ‘quality’ is applied to many very different sorts of item.⁹⁷ Other, and stronger, objections have been brought against the thesis that the predications are offered as highest genera.⁹⁸ And it is clear that if Aristotle did mean his theory to be a theory of highest genera, then he botched the job. Nonetheless, the texts give strong support to the orthodox and traditional thesis.

Porphyry’s acceptance of the Aristotelian decad was controversial. In particular, Plotinus had subjected the Aristotelian theory to a thorough and detailed criticism. Porphyry’s acceptance did not close the argument—but his views largely prevailed.⁹⁹

⁹⁵ See also e.g. *Cat* 11a37–38; *APst* 88b1–3; *Phys* 189a13–14; *An* 412a6.

⁹⁶ 8b26–27: *εἶδος*—taken up by *ἔτερον γένος* (9a14), *τρίτον γένος* (9a28), and *τέταρτον γένος* (10a11); but note *τρόπος* at 10a25.

⁹⁷ See Simplicius, in *Cat* 220.2–221.11; cf 228.6–12. The point addressed by Simplicius has been rediscovered by Mann, *Discovery*, p. 53 n. 41. Against the view that the categories are to be construed as genera see also Rohr, ‘Transitivity’; Morrison, ‘Taxonomical interpretation’.

⁹⁸ See e.g. *Cat* 14a23–25 (‘Good and bad are not in a genus—they are themselves genera of things’); and esp 11a20–38, where Aristotle urges that ‘if the same item turns out to be both a qualified item and a relative item, there is nothing absurd in its being counted in both genera’—an item cannot, trivially, belong to several non-subaltern genera, so that ‘genera’ at 11a38 must be used loosely. But note that *Met* 1021b3–6 tacitly corrects *Cat*.

⁹⁹ See Additional Note (G).

There are finitely many most special items, infinitely many individuals. [6.11–13]

The most special items are plural in number but not infinite.¹⁰⁰ That there is a plurality of species—and hence of most special items—is trivial: a species is the result of dividing a genus, so that if there are any species then there are at least two species.

But why is the number of most special items finite? It is so because the number of species is finite; and the number of species is finite because the number of most general items is finite, every division of a genus produces a finite number of species, and every sequence of divisions terminates, after a finite number of splittings, in most special items. That Porphyry speaks unspecifically of ‘a certain number’ of most special items is hardly surprising: the question of how many lowest species there are depends on empirical investigations, and the number will presumably differ from one genus to another.

That there is a finite number of most general items—and in fact ten—has already been asserted. It is unclear how it might be proved. That every division produces a finite number of species is a commonplace—for example, Cicero affirms that

there is a determinate number of species subordinate to each genus. (*Top* viii 33)¹⁰¹

In one passage Boethius appears to take this as an empirical conjecture (*in Isag*² 226.20–21); but elsewhere he says that ‘there cannot be either infinitely many species of a genus or fewer than two’ (*div* 877c).¹⁰² That every sequence of divisions is finite is urged in one of the more difficult passages of the *Posterior Analytics*.¹⁰³

Why cannot an infinite set of species be generated as follows? Every integer is either even or odd, so that the even numbers form a species of the genus of integers. Every even number is either divisible by four or not so divisible, so that the integers divisible by four are a subspecies of the species of even numbers. And then the integers divisible by eight, by sixteen, . . . and so on to infinity. No doubt these collections

¹⁰⁰ At 6.12 you might expect ‘ἀπείρα’ for ‘ἀπείρω’; but see e.g. Plato, *Parm* 144a for the expression ‘infinite number’.

¹⁰¹ Cf e.g. Quintilian, V x 63; Boethius, *in Cic Top* 1109b; 1110a.

¹⁰² See below, p. 132.

¹⁰³ *APst* A 19–23; cf Barnes, *Posterior Analytics*, pp. 169–183.

of numbers are not species; no doubt ‘divisible by two’ is a specific difference whereas ‘divisible by four’ is not. But it would be pleasant to know why not.

As to individual items, according to Aristotle,

names are finite, and so is the number of expressions; but the objects are infinite in number. (*SEL* 165a10-12)

Porphyry modifies Aristotle’s claim; for he says that ‘objects and expressions are, I suppose, infinite in number’, and he refers to ‘the infinity of the things which exist and of the expressions which signify them’ (*in Cat* 58.7-12). At any rate, the infinity of individuals is a Peripatetic thesis.

Not every commentator accepted it. Starting from the ‘evident premiss’ that ‘no quantity is greater than the infinite’ (*in Isag* 85.20), Ammonius tries to prove that neither species nor individuals can be infinite in number. First, there are more individuals than there are species. But there cannot be more individuals than species if there are infinitely many species. Hence there are finitely many species. Secondly, suppose that there are infinitely many individuals. There are two possibilities. (i) The members of one or more species are infinite. Now the members of two species, taken together, are more numerous than the members of either species taken separately. (There are more men and oxen than there are men.) But there cannot be more members of the two than of the one if there are infinitely many members of the one. Hence there are not infinitely many members of any species. (ii) The members of each species are finite. But there is a finite number of species. Hence the number of individuals in all species taken together is finite. (See Ammonius, *in Isag* 85.19-86.26; cf [Elias], *in Isag* xxvi 10-20.)

Let the argument be an *amuse-gueule*. Ammonius tries to reconcile his thesis with the text of Porphyry by claiming that individuals are infinite ‘not in existence but insofar as they are continually coming into being’ (*in Isag* 85.2). That is to say,

the number of individuals is limited; but it possesses a sort of infinity inasmuch as the individuals are always coming into being in a world which is eternal. (*ibid* 86.27-28; cf David, *in Isag* 160.7-10)

Ammonius is trying to have it both ways; but his text does offer an answer to the question: Why suppose that there are infinitely many individuals? The world is eternal, there will always be individuals, individuals have a limited lifespan—hence an infinity of them.

In his first commentary Boethius offers the same argument (*in Isag*¹ 77.5–7); in his second commentary he repeats it but adds a new consideration:

The individuals which fall under each species are infinite either because they are so numerous and are found in such diverse regions that they cannot be grasped and comprehended by knowledge or by number, or else because, being liable to generation and corruption, now they begin to exist and now they cease. (*in Isag*² 226.22–227.3)

The first option suggests that individuals are ‘infinite’ in the sense that they cannot be grasped by science—they are, as it were, unsurveyable (even if they are not literally infinite in number).¹⁰⁴ Was this Porphyry’s meaning?¹⁰⁵ Hardly: the infinity of individuals contrasts with the finite number of lowest species—and Porphyry surely means that lowest species are finite in number, not that they are surveyable.

Hence Plato’s advice on how to divide. [6.13–23]

A tiro reader, it has been thought, must have found this one of the more mystifying passages in the *Introduction*. Porphyry gives a partial and allusive description of the method of division and collection, into which he inserts what appear to be some deeply metaphysical remarks. The description can be read as a set of rules; but the rules are purely formal—they are not practical instructions for making a division. Nor does Porphyry offer any indication of the utility or point of the method.

Doubts about the utility of division might be shared by a modern reader. Plato has Socrates say that

I am myself a lover of these divisions and collections—in order that I may be capable of speaking and thinking. (*Phdr* 266B)

But it is not easy to see how such activities might make you a better thinker and speaker—and harder still to believe that you could not think or speak without them.

¹⁰⁴ So too e.g. David: ‘Some say that he means the indeterminate by the infinite’ (*in Isag* 162.28).—al-Tayyib, *in Isag* 167, reads ‘infinite’ for ‘not infinite’ at 6.12; and he explains that ‘infinite’ means ‘unsurveyable by us’. So too Seneca, *ep* lviii 18–19, says that there are infinitely many species—meaning that there is an unsurveyable number.

¹⁰⁵ The pertinent sense of ‘infinite’ is attested for him: *quaest Hom Iliad* XIV 200 [189.5–21].—On late Platonic conceptions of infinity see Whittaker, ‘Infinity’.

Perhaps Porphyry's early readers would have been less perplexed. Division was indeed a Platonic invention. But by Porphyry's time, it had long been a common philosophical method. Aristotle had attacked certain false theories about division and certain erroneous practices; but he had never rejected the method of division. The Stoics practised it; and the later Peripatetics developed it with enthusiasm. Andronicus' essay on division was particularly admired:

What great advantages the science of division brings, and how this study was always held in honour in the Peripatetic school, is shown by the book on division put out by Andronicus, a most diligent old master. This book was commended by Plotinus, the gravest of philosophers, and rehearsed by Porphyry in his commentary on Plato's *Sophist*—and the same author advertises the utility for this study of his own introduction to the predication. (Boethius, *div* 875d-876b)

There was nothing peculiarly Platonic, let alone metaphysically Platonic, about division. Nor indeed was it a peculiarly philosophical thing. On the contrary, it was introduced into grammatical and rhetorical studies, so that tiro philosophy students would know something about it before they read the *Introduction*.¹⁰⁶

And no doubt a tiro would have learned that division was of the first importance to any scientific undertaking: the method of division is what analyses the constitutive terms of any science, organizes them into a systematic structure, and enables the scientist to fabricate the definitions which will be among the first principles of his science. More generally, the method of division exposes the similarities and differences among things; and

it is on a recognition of the differences of each of the things which exist that the arts all depend. (Galen, *adv Lyc* XVIIIA 209)

So—Galen assures us—said Plato, and Aristotle, and Theophrastus, and Chrysippus, and Mnesitheus.

Again, scientists make mistakes; and most medical scientists, according to Galen, make many mistakes:

¹⁰⁶ For Porphyry on division see *in Sopf* 169 = Boethius, *div* (above, pp. xi-xii)—note that *div* presupposes a study of *Cat* (883a).—On Aristotelian division see e.g. Balme, 'Division and differentiae'; Falcon, 'Theory of division'; on Andronicus' influential essay see Moraux, *Aristotelismus* I, pp. 120-132; on Boethius on division see Magee, *Boethii*; de Libera, *Art*, pp. 253-267; on division as a feature of handbooks see Fuhrmann, *Lehrbuch* (and *ibid* pp. 69-74 on Varro's divisional pyrotechnics); more generally, for the history of the method of division see—with large literature—Mansfeld, *Heresiography*, pp. 78-109, 326-331; Magee, 'Boethius' and *Boethii*.

the first and greatest cause of this is bad division: some of them do not go beyond the first and highest genera . . . ; others split up to a certain point but do not reach the end; and many have made use of bad divisions. (Galen, *ad Glauc XI* 4)¹⁰⁷

An intelligent tiro would have some questions to raise about all this; but he would not have been foxed by the allusions to division in the *Introduction*.

Porphyry refers to Plato's advice on division. The commentators find in Porphyry's text the four Platonic 'rules' for division; and they identify the Platonic reference.¹⁰⁸ There is an echo of the *Philebus* (a dialogue on which Porphyry had written a commentary): 'leave the infinites alone' at 6.16 alludes to 'leave them alone and bid them farewell' at *Phlb* 16E (cf 20A). But the allusion may be unconscious, or at any rate insignificant. When Galen wants to give a brief account of Plato on division he refers to *Soph*, *Pol*, *Phlb*, *Phdr*, *Rep*, 'and other of his works'.

In the *Philebus* and the *Phaedrus* he shows that the study of division and composition is most necessary for the constitution of the arts, and he urges us to be practised in it in two ways: descending from the first and most general item to those which no longer admit splitting, by way of the intermediate differences . . . ; and again ascending from the most special items, which are many, to the first genus by composition. (PHP V 753)

No doubt Porphyry's reference to Plato is similarly comprehensive: he is not thinking of any individual text.

The 'Platonic rules' are not laid down as such by Plato himself; but they can be found in Aristotle (*APst* 91b28–32; 96b15–97b6)—and in another author of the fourth century BC:

Mnesitheus requires us to start from the first and highest genera and to split them according to species and genera and differences; then to split the split items in the same way; and the new items again in the same way until we arrive at a sort of species the splitting of which yields items which are one in number and individual. (Galen, *ad Glauc XI* 3–4)

Mnesitheus was a doctor and a contemporary of Aristotle. Galen observes that his prescriptions are familiar to anyone who has read Plato.

¹⁰⁷ The same complaint at *diff. feb* VII 274, echoing Plato, *Phlb* 16E–17A.

¹⁰⁸ e.g. Ammonius says that 'Plato says this in the *Sophist*' (in *Isag* 85.8–10); Busse refers to *Phlb* 16C, *Polit* 262AC, and *Soph* 266AB; and in his apparatus to Ammonius, in *Isag* 85.7, he adds *Soph* 219ff (de Libera, *Isagoge**, p. 52, takes over the four references); Westerink, in his apparatus to [Elias], in *Isag* xxxvii 2, mentions *Phlb* 16CE and *Soph* 253DE.

The rules are these. (1) You should start the divisional descent from a most general item—for example, from substance (cf *APst* 91b30). Why so? On some accounts of the matter, a proper definition consists of a first genus and a full sequence of differences. But the handbooks have a less stringent requirement:

Definitions are generated from division in the following way: you must take the genus of the object which is to fall under the definition (e.g. animal for man), and then split this according to its proximate differences, descending to the species (e.g. into rational and non-rational, mortal and immortal), so that if the proximate differences are added to the genus, the result is a definition of man. (Alcinous, *didask* v [157.4-10])

To produce a ‘complete’ division you must of course start at the top. But why produce a complete division?

(2) Plato urges us to pass through the intermediate items. Porphyry clearly means that we should pass through all the intermediates and not leave a stage of the descent unvisited. So too Aristotle: ‘we should not omit any intermediates’ (*APst* 91b30; 97a25-26; *Top* 143a15-17)—and Cicero affirms that ‘to omit an item is the greatest vice in dividing’ (*off* I iii 10; cf Boethius, *in Cic Top* 1106E). Moreover, we must go through the intermediate items ‘in order’ (*APst* 91b29; 97a25) and divide a genus into its proximate species—so Alexander (e.g. *in Top* 302.23); so the Stoic definition:

division is the splitting of a genus into its proximate species (Diogenes Laertius, VII 61);

The rule was a commonplace.¹⁰⁹

Why go through all the intermediates? If a proper definition consists of a first genus and a full sequence of differences, then if you jump a stage in the division you will not have the material for a proper definition. But sometimes the Aristotelian view requires a definition to contain a genus and the last difference; and on such an understanding, there is no need to traverse all the intermediates. No doubt there were other scientific reasons for being thorough.

(3) The divisions must be made ‘by the specific differences’—and not by any difference you might light upon. The items taken must be answers to ‘What is it?’ or be essential to their subject (*APst* 91b29; 97a24-25). The technical term ‘specific difference’ is not formally introduced until

¹⁰⁹ See e.g. Sextus, *M* XI 15; Clement, *strom* VIII vi 18.7; Boethius, *div* 884D. For ‘proximate’ see above, p. 112.

8.16. But if you want to divide a genus into species it is evident that you should use a difference which is species-making or specific.

Two questions pose themselves here. First, is there a unique set of specific differences for any genus? This question is best postponed.¹¹⁰ Secondly, do specific differences always come in pairs?

Illustrative divisions are generally dichotomous; and the commentators generally suppose that dichotomy is both desirable and normal (e.g. Boethius, *in Isag*¹ 22.14–15; [Elias], *in Isag* xxi 3). In general, ‘it is best to divide a genus into two species—otherwise into three’ (Clement, *strom* VIII vi 20.1). The thesis later hardens into doctrine:

Every division of a genus into species goes to two or three—and rarely four—items; for it is impossible for a genus to be divided into five species or more. (John of Damascus, *dial* 10; cf 6)

The thesis—but not the doctrine—is Platonic. It is sometimes difficult to divide things into two

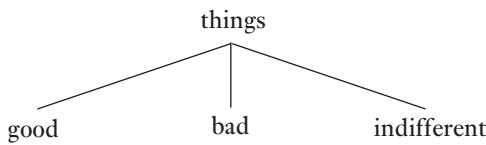
so let us divide them at the joints, like a sacrificial animal, since we cannot divide them in two; for you must always split into the least possible number. (*Plt* 287c; cf *Phdr* 16D)

In his essay on division, Boethius first gives a soft version of the thesis:

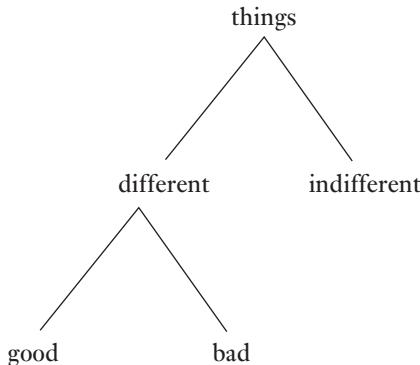
Every division of a genus into species must go either into two parts or into more—there cannot be infinitely many species of a genus, nor fewer than two. (*div* 877c)

But a little later he argues that ‘every division would cut into pairs were names for species and differences not lacking’ (883D–884A). For the differences which divide a genus must be ‘opposites’ (881c). Now in fact ‘we set pretty well all differences among contraries’ (883c; cf 884BC), and since many contraries have ‘intermediates’ between them, we shall frequently have more than two species to a genus. A division of quality, for example, might yield good and bad, two contraries; but since good and bad do not exhaust the spectrum, the division must also give the intermediate item, namely indifferent. (See 883c; cf *in Cat* 267c; *in Cic Top* 1109B.) But such non-dichotomous divisions are merely the result of linguistic poverty; for ‘if names are imposed, it is evident that division is always into two terms’ (883D). For example (884A), the trichotomy:

¹¹⁰ See below, pp. 181–185.



may be turned into a linked pair of dichotomies if we introduce the novel term ‘different’, thus:



Boethius’ essay on division is heavily dependent on Porphyry; and I have rehearsed this Boethian argument in case it is Porphyrean. But the argument is muddled.¹¹¹

(4) Plato urges us to stop our descent once we reach the most special items: we should not drop down among the individuals or the infinites (cf. Aristotle, *APst* 91b32; *Top* 109b14). We should not do so because ‘there will be no knowledge of them’ (6.16). Everyone knew that ‘the infinite is inimical to all the sciences’ (Aristoxenus, *apud Porphyry, in Ptol harm* 79.9–10), that the objects of knowledge ‘are not infinite—that is not possible, nor could there be any knowledge of them’ (Plotinus, *enn* VI i 1.8–9). But there are two different ideas in play.

First, the infinites are individuals, and there is no knowledge (no genuinely scientific knowledge) of individuals. The thesis is Aristotelian: ‘there is no science of singulars’, as Alexander puts it (*in Met* 203.15),

¹¹¹ See Magee, *Boethii*, pp. 114–115.

echoing his master (e.g. *Met* 1039b27–1040a7).¹¹² It is not a thesis about the limits of human knowledge, but about the limits of knowledge *tout court*. According to Alexander, divine providence does not reach as far as individuals.

For providence can only be shown by the gods insofar as they have knowledge, and how is it possible for them to have a continuously changing knowledge of individuals, particularly since these are infinite? (*in Met Lambda*, frag 36)

Individuals are changeable and they perish: they ‘are infinite and indeterminate, whereas the sciences deal with determinate items’ (Alexander, *in Met* 79.10).

There are several variations on this theme in the Peripatetic tradition. It does not sit easily with all of Aristotle’s philosophy; and it has the curious consequence that history and geography and large parts of astronomy are not areas of genuine knowledge.

Secondly, individuals are infinite, and ‘the infinite *qua* infinite cannot be known’ (Aristotle, *Phys* 187b7–8); so ‘singulars are infinite and unknowable’ (*Rhet* 1356b31–32). For example, there cannot be infinitely many principles or causes of what exists; for in that case what exists could not be known (*Phys* 189a12–13). We lack the time:

If the species of causes were infinite, then there would be no knowledge; for we think that we know something when we recognize its causes, but what is infinite by addition cannot be surveyed in a finite time. (*Met* 994b27–31)

Thus Alexander affirms that

it is not possible to go through all the singulars by an induction; for singulars are unsurveyable. (Alexander, *in Top* 86.26–28)¹¹³

And Alcinous’ question—‘How could you survey the individuals, which are infinite?’ (*didask* xxv [178.5–6])—expects no reply.

The contention here is not that you cannot have knowledge of Plato and of Socrates, but that you cannot have knowledge of individuals in general, of all the individuals. Each successive division produces a

¹¹² Ammonius says that there is no science or definition of individuals ‘as has been shown in the *Apodictics*’ (*in Isag* 85.8–10). Busse refers to *APr* 43a25 and *Met* 1039b28; but Ammonius is thinking of *APst* 75b21–26 (cf Barnes, *Posterior Analytics*, pp. 132–133). —On knowledge and the infinite see Barnes, *Toils*, pp. 44–51.

¹¹³ There are other reasons why ‘the infinite’ is unknowable—for example: ‘As a sign that what is infinite is unknowable in its own nature, Aristotle offers matter, since matter is thought to be infinite according to its very account, being unshaped as to any nature of its own and having no limit of its own’ (Alexander, *in Met* 164.16–18). Cf *ibid*, 211.1–2; *in Top* 34.19–21; 139.3–4.

plurality of new items—but a finite, and a surveyable plurality. If we go beyond the most special items and divide into individuals, the attempt will defeat us; for there is an infinite, and hence an unsurveyable, number of individuals.

Collection is the image of division. When we divide, we ‘proceed through a plurality’ (6.17); for the division of any item produces two (or more) new items. When we collect, we ‘bring the plurality together’ (6.18).¹¹⁴ As Boethius puts it, ‘a genus collects a plurality of species, the species divide a single genus’ (*div* 885c). You might reasonably infer that collection should start where division ends—with most special items. But Porphyry seems to suggest that collection starts from individuals; and according to Alexander, Plato says that

the task of the method of division is to make the one many and to bring the many to one—that is equivalent to dividing genera into species and what is under them, and to putting individuals together and bringing them under the heading of one genus. (*in Top* 1.15–18)

Alexander is perhaps thinking of a passage in the *Phaedrus*:

You must understand what is said with respect to a species by passing from several perceptions to a single thing united by reasoning. (*Phdr* 249B)

I start from Bucephalus and Barbary and Copenhagen—and hope to ascend to horse. I start from Hodge and Jeoffry and Ratty—and hope to arrive at cat. And so on for mice and men. Then I put these species together and move up to mammal. And so on, higher and higher.

The thesis that division produces a plurality and collection a unity is a trivial truth; yet at 6.16–23 Porphyry offers an argument for it—at any rate, the passage contains the word ‘for [$\gamma\acute{\rho}$]’ thrice (6.19, 21, and 22). Thus:

(1)(a) In descending we divide and produce a plurality, and (b) in ascending we collect and form a unity.

For (2)(a) species and genera collect, whereas (b) individuals divide.

For (3)(a) a plurality of men (say) is one man by participation in a species, and (b) the one man is a plurality by virtue of the individuals.

¹¹⁴ We ‘bring the plurality together into one’ according to the Greek MSS. But Boethius and the Armenian translation (Sgarbi, ‘Osservazioni’, p. 413) and some of the Greek commentators omit ‘into one’, which presumably came into the text from a (correct) marginal gloss.

For (4)(a) individuals divide and (b) what is common collects.

This is a curious piece of reasoning. Its conclusion, (1), hardly needs proof. Steps (2) and (4) appear to be identical. The reference to individuals in (2b) and (4b) is odd.

But it is proposition (3)—to which I shall confine myself—which is the most queer. ‘By sharing in the species the many men are one man’ (6.21): what does Porphyry mean?

The terminology of the passage allegedly gives the game away. At 6.18, ‘bring together [*συναἴρειν*]’ is Platonic (*Phdr* 249B; cf Plotinus, *enn* IV vii 7.20–21). So too the adjective ‘*συναγωγός*’ at 6.18–19 (which my translation turns into a verb, ‘gather’): its use here derives from a celebrated passage in the *Timaeus*—we need a bond which ‘gathers’ items, and the best bond ‘makes them one’ (31BC; cf Alcinous, *didask* xii [167.32–33]; Plotinus, *enn* IV iv 40.12). And Iamblichus speaks of

powers . . . which gather from a plurality to one, and powers which are divisive from a unit into a plurality. (*comm math sc* xii [45.24–46.1])¹¹⁵

At 6.21 ‘sharing’ is ‘*μετονσία*’, a term resonant with Platonic metaphysics (e.g. Alcinous, *didask* xxvii [180.5]; Plotinus, *enn* VI i 9.15–16). What is shared is a species; but here the word ‘*εἶδος*’ evidently alludes to the Platonic Forms—and the ‘one man’ or ‘one and common man’ (6.21–22) must be the Platonic Form of Man. For

Socrates did not himself bestow being a man on what is not a man—rather, man bestowed it on Socrates. For a certain man is a man by partaking in [*μεταλήψει*] man. (Plotinus, *enn* VI iii 9.27–30)

Again, the adjective ‘collective [*συλληπτικός*]’ (6.23) is rare (except in the biological sense of ‘capable of conceiving’)—and Platonist.¹¹⁶ Its parent verb, ‘*συλλαμβάνειν*’ (note 10.16) is found at *Soph* 234B and *Plt* 263D; and then throughout the Platonist tradition (e.g. Plotinus, *enn* V vi 3.5–8).

All this, it is said, stinks of Platonism. And of Plotinian Platonism. It should be compared to passages such as the following, from Porphyry’s *Sentences*:

What is really existent is said to be many not by having different places or different measures of mass, nor by being a heap, nor by circumscriptions and

¹¹⁵ The noun ‘*συναγωγή*’ contrasts with ‘division’ from Plato onwards—see esp *Phdr* 266B.

¹¹⁶ See e.g. Nicomachus, *intr arith* II xix 1; [Iamblichus], *theol arith* 9.14–15.

distinctions which divide it into parts, but rather by being divided as to plurality by an otherness which is immaterial and massless and non-plural; that is why it is also one—and not like one body or something one by place or by mass, but one plurality of items. (*sent* 36)

Or again:

The incorporeal subsistences, when they descend, are partitioned and pluralized into the individuals by a deficiency of power; when they ascend, they are unified and return to togetherness by an abundance of power. (*ibid* 11)

The *Sentences* are paraphrases of, or ruminations upon, Plotinus. In the present paragraph of the *Introduction* we have a brief burst of Plotinian metaphysics.¹¹⁷

Let this Platonic bubble be pricked. The argument from terminology is not cogent. If ‘συλληπτικός’ is rare, its parent verb is not: ‘συλλαμβάνειν’ is at home in Aristotle (e.g. *Met* 992a1–2), and thereafter appears (in the pertinent sense) in texts of every hue (e.g. Galen, *diff puls* VIII 615; scholia to Dionysius Thrax, *GG* I iii 116.16–17). Again, ‘συναγωγός’ is found, for example, in Galen (e.g. *us part* III 659; IV 708) and in Sextus (e.g. *M* IX 8).¹¹⁸ Or consider ‘unificatory [ένοποιός]’ (6.23): quintessentially Platonic?—it appears first in Aristotle and is then common in the Aristotelian tradition.¹¹⁹ In general, many a word which a hasty clerk labels Platonic will turn out—whatever its remote origins—to be part of common philosophical parlance before the second century AD.

But surely ‘μετονομασία’ is specifically Platonic? Well, the noun is common enough from Aristophanes onwards. And it does not occur in Plato. It is, to be sure, used by Platonists—but also by Galen (e.g. *caus puls* IX 88) and Sextus (e.g. *M* VII 121; VIII 140) and Alexander (e.g. *mant*

¹¹⁷ ‘This paragraph is a sort of Neoplatonic excursus where, contrary to the methodological declaration placed at the beginning of the *Introduction*, Porphyry transcends the strict limits of the “more logical” treatment of the Peripatetics’ (de Libera, *Isagoge**, p. 52—with a reference to *sent* 11; cf p. xxxi n. 44; *Art*, p. 142 n. 126). Also e.g. Maioli, *Isagoge**, p. 38 (‘participation here is Platonic’); and Prantl, *Geschichte der Logik*, p. 628 (‘εἷδος is here used, in a single breath, both platonically and aristotelianly’).—Elsewhere de Libera says that ‘this vocabulary evokes both the ideas of procession and reversion and also the principle of reduction to the One, so typical of Neoplatonism’ (*Querelle*, p. 44). But neither ‘προόδος’ nor ‘ἐπιστροφή’ occurs in the passage—and in any event, the former term is Peripatetic (e.g. Alexander, in *Top* 542.8; in *Met* 137.12; 138.22; 149.22).

¹¹⁸ Note also *quaest Hom Iliad* XXIV 221 [269.15–270.6]: ‘Homer, when he has first named a genus . . . , often adds the species contained by it—using not the disjunctive connector (which does not gather together [συναγωγός]) but the conjunctive . . .’.

¹¹⁹ See e.g. Aristotle, *Met* 1045b16–17 (cf *An* 410b10–11); Alexander, in *Met* 58.9–12; 114.12–19. Porphyry uses the word again at *v Pythag* 50.

170.18–19).¹²⁰ The related verb ‘μετέχειν [participate]’ is found ten times in *Isag*,¹²¹ and is taken as another sign of Platonism. But the verb is also Aristotelian:

The definition of participating is admitting the account of what is participated—hence it is clear that species participate in their genera but not genera in their species. (*Top* 121a11–13)

The expression recurs several times in the *Topics*; it is glossed, correctly and without surprise, by Alexander.¹²² At *ant nymph* 6 Porphyry uses the phrase ‘by the participation of the forms [διὰ τὴν τῶν εἰδῶν μέθεξιν]’: there is no Platonism here—the εἰδῆ are Aristotelian forms (they are contrasted with matter).¹²³ The word also occurs in Stoic texts (e.g. Hierocles, *elem eth* IV 6–8); and in texts which are philosophically neutral—for example, in Galen, *meth med* X 128; *simp med temp* XI 422; or in Apollonius Dyscolus, *pron* 6.24–25.

It would be wrong to speak of Platonic and Aristotelian senses. When Apollonius says that man participates in animality, he is not thereby betraying a Platonic or a Peripatetic side to his thought. And when Alexander and Plotinus say that man participates in animality, they are not being respectively Aristotelian and Platonic. All three men use the same words in the same sense, and what they say is philosophically neutral and metaphysically empty—for they say that men are animals. It is not the word ‘participate’ which introduces the metaphysics: it is what comes next—an answer to the question, ‘And what sort of a beast, then, is animality?’.

And last, 6.22 and a fanfare for the Common Man. He returns at 7.25, and again—as ‘the common and special man’—at 11.14–16;¹²⁴ and he is to be identified with ‘the man predicated in common’ of *in Cat* 90.32–33 or 122.34. Surely he inhabits a metaphysical and a Platonic realm?

¹²⁰ The verb ‘μετεῖναι’ is also ordinary Greek: e.g. Galen, *diff feb* VII 279 (‘οἵ μετεστὶ συνέσεως’ = ‘those with intelligence’).

¹²¹ 17.6; 18.11–13; 19.4–6; 20.14–15; cf ‘μέθεξις’, 17.8; ‘μετοχή’, 21.15; 22.10.

¹²² See e.g. *Top* 121a27–39 (‘individuals too participate in the genus and in the species’: a37–38); 122b20–24; 126a17–22; 132b35–133a11 (‘what holds of something in virtue of participation contributes to what it is for it to be’: b36–a1); 134b18–22; Alexander, *in Top* 301.9–10: ‘He indicates what participating is: to accept the account of what is said to be participated in to participate in it.’ Cf *ibid* 393.25–394.7; also e.g. Aristotle, *Met* 1030a13–14; 1037b18–22; *EE* 1217a27–29; Aspasius, *in EN* 16.21.

¹²³ See also *in Ptol harm* 7.16; 60.34 (and note 62.10, where Porphyry is quoting or paraphrasing Theophrastus [= frag 716]).

¹²⁴ At 11.14–16, Grgenti translates: ‘“man”, the common and specific name . . .’—which would at once dissolve any metaphysics. But the translation is out of court.

First, the Common Man is not a Platonic Form. He is carefully distinguished from the Form of Man by Alexander:

For even if there are no Ideas of individuals, there are of the common items in the individuals—of man (but not of Socrates and Plato), which man is common in them and in all items in the same species as them because it inheres in them all. (*in Met* 77.31–34)

There is an Idea or Form of the common man: the common man is not himself a Form. Lest this should be thought a Peripatetic travesty, let me cite Syrianus, Platonist of Platonists:

If general items are prior to singulars, they are not prior in such a way as to stand in no relation to them and to be causes of their substance—two things which hold of Ideas; and if they are secondary, as most people usually say, how can things which are late born and insubstantial and which come to be in bare thoughts hold the office of demiurgic and beneficent forms? (*in Met* 106.8–13)

The Common Man is one of Syrianus' general items: he is far too vulgar to be a Form.

Secondly, as the passage from Alexander shows, the Common Man is accepted by Peripatetics as well as by Platonists. Elsewhere Alexander remarks that

if you take the form of man without the material circumstances you have the common man—for the mutual differences among singular men depend on their matter, since their forms, in virtue of which they are men, show no differences. (*an* 85.15–18)

And he speaks of 'the common and general philosophy' as opposed to one or other of the parts of philosophy (*in Met* 245.30). The common X or the general X or the X predicated in common is no doubt to be identified with the 'one item, apart from the many' which settles in the Aristotelian soul at the end of *APst*.¹²⁵

Phrases of the form 'the general X' and the like are not limited to Platonists and Peripatetics. The first occurrence, so far as I have noticed, is in a Stoic context:

Chrysippus holds that the general pleasant is an object of thought, the special pleasant—that which actually strikes us—an object of perception. (Stobaeus, *ecl* I 1 30)

¹²⁵ 100a6–8.—Note also *Top* 143b29–30: 'This topic is useful only against those who [reading 'ὅσοι τῷ'] think that genera are one in number—this is done by those who posit the Ideas'. The error made by the Platonists is not that of positing one common man—it is that of supposing that the one man is 'one in number'.

And ‘the general man’ happens to be found first in Seneca (*ep* lviii 16). The formula is peculiarly frequent in Sextus, who speaks of the general man as opposed to the special man (*M* VII 222; 246; 269; X 291; *M* IV 17),¹²⁶ of general proof compared to special proof (*PH* II 171–173, 176; *M* VIII 340–342; 348–350; cf Diogenes Laertius, IX 91), of general and special virtues or inquiries (*M* XI 31; *PH* I 188), of general phantasy and of general syllables and of general lines (*M* VII 246; *M* I 126; III 92). One of these texts recounts an Epicurean argument:

Demetrius of Laconia, one of the eminent members of the Epicurean school, said that the objection is easy to refute. For, he says, if we establish a single one of the special proofs (for example, the proof which concludes that there are atomic elements or that there is void), and if we show it to be reliable, then we shall thereby and immediately have it that general proof is reliable. For where there is the species of some genus, there certainly is found the genus of which it is a species. (Sextus, *M* VIII 348)

Again, such phrases are found among the grammarians. Here is a curious example. Some Peripatetics had answered the question ‘How many parts of speech are there?’ by saying ‘It all depends which speech you look at—some speeches have two parts, some three, and so on’. The grammarians reply thus:

We say that it is the universal speech which has eight parts, and it is impassive. Just as the universal man still stands even if Plato or Alcibiades dies, so if a particular expression lacks a noun or a verb, the universal speech is itself untouched. (scholia to Dionysius Thrax, *GG* I iii 517.28–31; cf 114.38; Strabo, I ii 6)

It is evident from all this that the phrase ‘the common X’ carries no metaphysical burden: you may speak of the common man while remaining a Peripatetic or a Stoic or an Epicurean—or a grammarian. Nor is there much mystery about the phrase. When Sextus says that proofs are either general or special, he does not mean to distinguish two types of proof. Rather, he is distinguishing between proof in general and this or that particular proof. Similarly, the Common Man is neither Superman nor Everyman—he is simply man in general; that is to say, to talk about the Common Man is to talk about men in general rather than about this or that particular man. ‘The general X’ means ‘Xs in general’.

In short, the materials which Porphyry uses in this section are not specifically Platonic, nor do they impose any particular metaphysical posture.

¹²⁶ See also *M* VIII 59 (‘the common man’)—other common men in Boethius, in *Int*² 133.5–8; 137.22–23 (*homo specialis* vs *homo particularis*).

You might accept that conclusion—and yet contend that Porphyry made a specifically Platonic use of the materials. If so, the use must be discovered in proposition (3): ‘by sharing in the species the many men are one man, and by the particulars the one and common man is several men’. I suppose that Porphyry means something like this: (a) insofar as ‘man’ is specifically predicated of Theo and of Dio and of Philo, Theo and Dio and Philo are one thing, namely a man; and (b) ‘There are several men’ is true insofar as ‘man’ is true of Theo and of Dio and of Philo. That, no doubt, is a deflationary interpretation. But if you prefer inflation, there is no reason why the hot air should be Platonic rather than Aristotelian, why it should be Plotinian rather than Alexandrian gas.

‘But come on—we know that Porphyry was a Platonist; and when a Platonist uses words like “participate” and “gather”, we know what he’s got on his mind.’ Porphyry was a Platonist. The *Introduction* is compatible with Platonism. But the *Introduction* is not, and was designed not to be, a Platonist document.

The accounts of genera and species yield three theses about predication. [6.24-8.3]

Porphyry has said what a genus is and what a species is, and he has shown that the genus is one and the species several (7.1)—that is to say, as Aristotle puts it, ‘of every genus there are several species’ (*Top* 123a30; cf 127a23-24). He now draws certain consequences.

Consider any series of terms

(T) $\langle X_1, X_2, \dots, X_{n-1}, X_n \rangle$

where each X_i is a genus of its successor (if it has one) and a species of its predecessor (if it has one), and where X_1 is a most general item, X_{n-1} a most special item, and X_n an individual.¹²⁷ About such a series Porphyry states three theses. First—at 7.2-3—each item in (T) is predicated of each later item in (T), or:

(1) For all i and j , where $i < j$, X_i is predicated of X_j .

Secondly—at 7.3-4—no item in (T) is predicated of any earlier item in (T), or:

(2) For all i and j , where $i > j$, X_i is not predicated of X_j .

¹²⁷ That the chain extends to individuals emerges at 7.10.

Porphyry offers no argument in favour of (1). Trivially, if X is predicated generally of Y, then X is predicated of Y. Hence every X_i in (T) is predicated of its immediate successor. But if X is predicated of Y and Y is predicated of Z, then X is predicated of Z. (Predication is transitive.¹²⁸) Hence every X_i in (T) is predicated of each of its successors.

Porphyry offers to prove (2): a species is not predicated of its genus, nor of any earlier item in (T), because 'it does not convert' (7.4). The argument is taken from a sentence in Aristotle which enunciates versions of (1) and (2):

Genera are predicated of species, but the species do not convert to the genera. (*Cat* 2b20–21)¹²⁹

The word 'convert [*ἀντιστρέφειν*]' means 'turn around', or 'reverse'. It became a technical term in Aristotelian logic, wherein 'conversion is so called in several ways' (Alexander, *in APr* 29.7).¹³⁰ What Porphyry here means by conversion emerges from a passage in his commentary on the *Categories*:

Definitions must convert with the names <which they define>, and converting is being equal to and neither surpassing nor falling short—e.g. if someone is a man, he is a rational mortal animal. (*in Cat* 63.20–22)

Terms convert if and only if they are 'equal' to one another:¹³¹ species do not convert—that is, species do not convert with genera—inasmuch as species are not equal to genera.

And at 7.4–8 Porphyry duly states that species do not convert inasmuch as they are not equal to their genera. More precisely, he urges that if X is predicated of Y, then either X is larger than Y or X is equal to Y; that if X is a species of Y, then X is smaller than Y; and hence that if X is a species of Y, then X is not predicated of Y.

The first premiss of his argument is a Peripatetic commonplace:

Everything predicated truly of something is either equal to it or wider than it. (Alexander, *in Top* 317.7)¹³²

¹²⁸ See below, pp. 242–243.

¹²⁹ See also e.g. Alexander, *in Top* 367.16–17.

¹³⁰ See Barnes *et al.*, *Alexander*, p. 31; and below, pp. 209–211.

¹³¹ For the pertinent use of 'convert' see e.g. *Cat* 14a30 (below, p. 362), b15–18, 27–31; 15a5–8.

¹³² Cf e.g. Alexander, *in APr* 25.7–9; *in Met* 205.17–19; Apuleius, *int* iv [193.3–8]; later e.g. Ammonius, *in Int* 108.20–22; Boethius, *in Int*¹ 91.10–19; *in Int*² 162.12–17.

And Alexander also notices the second premiss:

It is a familiar fact that a genus is said wider than its species. (*ibid* 304.21)¹³³

But what do the terms ‘larger’ and ‘smaller’, ‘equal’ and ‘wider’ mean?

You might guess that X is larger than Y if and only if X is true of more items than is Y. And the guess might seem good enough for Porphyry’s argument: since every genus contains at least two species, there will be fewer members of any species than of its proximate genus (and hence than of any prior genus); and if there are more Xs than Ys, then there must be at least one X which is not a Y, so that Y is not predicated of X.

But that argument is fallacious. Odd numbers are a species of integer. But there are no more integers than there are odd numbers: the set of odd numbers has exactly as many members as the set of integers. This is not a doubtful, nor a special, case: according to the Peripatetics and to Porphyry, ‘the individuals . . . are infinite’ (6.12–13)—all, or almost all, species have infinitely many members.

In explaining what it is for X to be wider than Y, Ammonius starts by inventing a numerical example (‘Suppose that there are 1,000 items in the world . . .’: *in Int* 162.9–16); he then rejects the example, declaring—obscurely enough—that it is better to judge the question ‘on the basis of the things’ (*ibid* 162.10); and finally he offers this:

... when we say that animal is wider than man . . . we mean nothing other by this than that it is true to predicate ‘animal’ of that of which it is true to predicate ‘man’ but not *vice versa*. (*ibid* 163.2–5)

That is to say,

X is wider than Y if and only if X holds of every Y and it is not the case that Y holds of every X.

Ammonius’ elucidation is laborious and correct. It is an echo of Aristotle:

By holding wider I mean what holds of something universally and also of something else. (*APst* 96a24–27)

¹³³ On Aristotle, *Top* 121b3–4, 11–14; cf 122b35–36; 126a1–2; 128a22–23; see also Alexander, *in Top* 305.23 (‘a genus must be wider, being comprehensive [$\pi\epsilon\rho\iota\lambda\gamma\pi\tau\iota\kappa\acute{\sigma}$]’).—For ‘wider than [$\dot{\epsilon}\pi\acute{\iota}\lambda\pi\acute{\iota}\acute{\sigma}$]’ see 15.16; cf *in Cat* 90.4–6 (contrasted with ‘ $\dot{\epsilon}\pi\acute{\iota}\acute{\lambda}\acute{\lambda}\tau\tau\acute{\sigma}$ ’); 125.9–10; Aristotle, *Cat* 3b21–23; *APr* 47a33; *APst* 85b10; *Top* 121b1–14; Alexander, *in Top* 160.11–21 (where $\dot{\epsilon}\pi\acute{\iota}\acute{\lambda}\acute{\lambda}\tau\tau\acute{\sigma}$ = $\dot{\nu}\pi\acute{\sigma}$ and $\dot{\epsilon}\pi\acute{\iota}\lambda\pi\acute{\iota}\acute{\sigma}$ = $\pi\epsilon\rho\iota\lambda\gamma\pi\tau\iota\kappa\acute{\sigma}$). Note also such terms as ‘ $\dot{\nu}\pi\epsilon\rho\tau\acute{\iota}\acute{\nu}\acute{\sigma}$ ’ (*APr* 33a39), ‘ $\dot{\epsilon}\pi\epsilon\kappa\tau\acute{\iota}\acute{\nu}\acute{\sigma}$ ’ (*APst* 94a24).

For example:

Necessity is wider than syllogism; for every syllogism is a necessity but not every necessity is a syllogism. (*APr* 47a33–35)

It is plain that ‘X is wider than Y’ is not equivalent to ‘There are more Xs than Ys’. On the one hand, X may be wider than Y when there are just as many Xs as Ys (integer is wider than odd number). On the other hand, there may be more Xs than Ys without X being wider than Y (there are more ants than dodos).

Perhaps ‘larger’ and ‘wider’ are not synonymous? And although width is not a matter of relative numerosity, perhaps largeness is? But, first, it is not easy to separate the ‘larger’ of 7.5–6 from the ‘wider’ of 15.15–16. And secondly, the first and most familiar logical context for the words ‘larger’ and ‘smaller’ is Aristotle’s syllogistic (where the Greek words are generally translated as ‘major’ and ‘minor’); and Aristotle explains that by the larger extreme I mean that in which the middle is, and by smaller that which is under the middle. (*APr* 26a21–23)

The explanation is notoriously inadequate to its syllogistic task; but one thing is plain: ‘larger’ and ‘smaller’ are understood in terms of width and not in terms of numerosity.¹³⁴ Finally, Porphyry’s illustrative examples at 7.5–8 strongly suggest that he has width in mind.¹³⁵

In short, X is larger than Y if and only if X is wider than Y, and if and only if X contains Y; that is to say, if and only if X holds of every Y and Y does not hold of every X. Suppose, then, that X is predicated of Y: does it follow, as Porphyry affirms, that X is either larger than or equal to Y? Yes. Suppose that this is not so. Then Y is larger than X. Hence, it is not the case that X holds of every Y. But by hypothesis X holds of every Y.

At 7.8–19 Porphyry elaborates a third thesis: if one item in the series of terms (T) is predicated of another, then any predecessor of the one item is likewise predicated of the other; or:

(3) If X_j is predicated of X_k , then if $i < j$, then X_i is predicated of X_k .

¹³⁴ And note Apuleius’ implicit definition of largeness: ‘Generally, the subject is smaller and the predicate larger, comprehending not this subject alone but others as well’ (*int* iv [192.12–14]).

¹³⁵ At 7.6–8 ‘You will (not) say that . . .’ must be taken for ‘You will (not) truly say that . . .’, or ‘It is (not) true that . . .’; the same carelessness at 7.10—and often.

Like (1) and (2), thesis (3) comes from the *Categories*:

Whenever one item is predicated of another as of a subject, everything which is said of the predicate will also be said of the subject—e.g. man is predicated of a certain man, and animal of man: so animal will also be predicated of a certain man. (1b10–15).¹³⁶

There is a negative counterpart to (3), namely:

(4) It is not the case that if X_j is predicated of X_k , then if $i > j$, then X_i is predicated of X_k .

But neither Porphyry nor Aristotle mentions (4).¹³⁷

Porphyry illustrates (3) with an example (7.10–12—from *Cat* 1b10–15): does he also offer a proof? The answer depends on a textual point. At 7.12 Busse prints ‘οὖν’, with the Greek MSS. Boethius translates ‘enim’ and so presumably had ‘γάρ [for]’ in his Greek text. (But Boethius’ commentaries presuppose the reading of the Greek MSS.) What follows, in 7.12–19, is in effect an elaboration of thesis (1). Thus if we accept Busse’s text and take the particle ‘οὖν’ in its inferential sense, then Porphyry argues for thesis (1) on the basis of thesis (3); more precisely, he purports to derive an elaborated version of (1) from (3). But it is impossible to construct any half-decent inference along those lines. Perhaps ‘οὖν’ should be read in its resumptive sense: ‘Well then, . . . ?’ The result is intelligible but inelegant: Porphyry first states (1); then proves (2); then states and illustrates (3); then elaborates (1).

If we read ‘γάρ’, then Porphyry claims to prove (3) on the basis of (1). Inasmuch as (3) is hardly as evident as (1), a proof would not come amiss. So it is worth looking for one in 7.12–19.

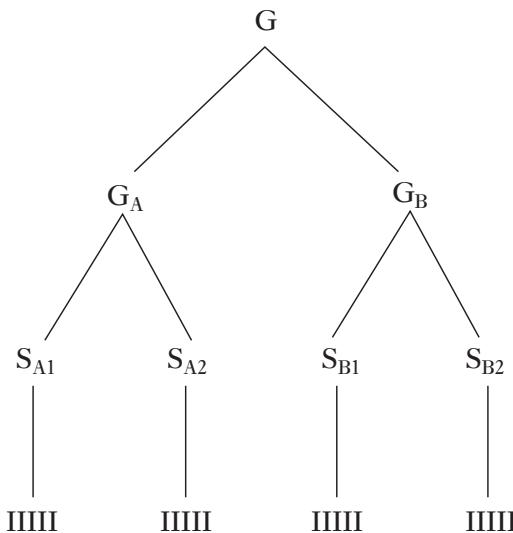
Porphyry’s discussion is fuzzy. On the one hand, the reference to the genus ‘before a most special item’ (7.17) suggests that he is arguing the question in terms of a simple case—namely a tree or chain with a most general item, one intermediate genus, a lowest species, and an individual:

¹³⁶ Cf 3b4–5; see in *Cat* 80.29–81.22.

¹³⁷ But note the following passage: ‘It is not necessary that what holds of the genus also holds of the species—for animal is winged and quadruped, but man is not; but what holds of the species necessarily holds of the genus too—for if a man is good, then an animal is good too. . . . It is necessary that if the genus is predicated of something, then one of the species is also predicated of it’ (*Top* 111a25–34). And a later modification: ‘It is impossible for anything to participate in a genus if it does not participate in any of its species—unless it is one of the species in the first division, for these participate only in the genus’ (*ibid* 121a28–30; cf Alexander, in *Top* 161.2–8: above, p. 84).

G—G_I—S—I

(The parenthesis at 7.14–15 serves to indicate that the case may be generalized.) On the other hand, the plurals at 7.17–18 suggest that he is thinking not of a tree but rather of a division:



Again, when Porphyry says that ‘any item which is only a species is said of all the individuals’ (7.18–19), we must understand ‘. . . of all the individuals under it’—even though the term ‘individuals’ at 7.17 is not thus restricted.

Let us set such infelicities aside and advance the discussion in terms of the simple series:

G—G_I—S—I

The elaboration of thesis (1) at 7.12–19 indicates that

- (i) S is predicated of I.
- (ii) G_I is predicated of I.
- (iii) G_I is predicated of S.
- (iv) G is predicated of I.
- (v) G is predicated of S.
- (vi) G is predicated of G_I.

These three propositions follow from (1). Now according to thesis (3),

- (vii) G_I is predicated of I .
- (viii) G is predicated of I .
- (ix) G is predicated of S .

And (vii) = (ii), (viii) = (iv), and (ix) = (v). This is not a proof of (3) on the basis of (1); but it might reasonably be thought to indicate how (3) is, as it were, implicit in (1)—and hence to warrant the word ‘for’ at 7.12.

However that may be, a proof is not difficult to invent. Suppose that

X_j is predicated of X_k

and that

$i < j$.

Then from

- (1) For all i and j , where $i < j$, X_i is predicated of X_j

it follows that

X_i is predicated of X_j .

Hence by transitivity:

X_i is predicated of X_k .

Hence,

- (3) If X_j is predicated of X_k , then if $i < j$, then X_i is predicated of X_k .

The theses proposed at 6.24–7.19 are explained in terms of extensional notions—‘larger’, ‘wider’, ‘smaller’, and so on. At 7.27–8.3, after some remarks about individuals, Porphyry returns to the language of containment, repeating what he has said at 5.15–16: every item in a Porphyrean chain contains each of its successors and is contained by each of its predecessors. And containment is here glossed in terms of wholes and parts: a species is contained by the genus, ‘for a genus is a sort of whole’ (8.1).

The language of 6.24–7.19 has been held to show that Porphyry gave an ‘extensionalist’ account of terms—and thereby inaugurated the ‘calculus of classes’.¹³⁸ The second part of this claim can be quickly dismissed: anything in Porphyry which suggests a ‘calculus of classes’ is

¹³⁸ So Bochenski, *Formale Logik*, pp. 155–156; cf Lloyd, ‘Neoplatonic logic’, p. 159; Prantl, *Geschichte der Logik*, pp. 628–629—for whom the appeal to extensions was a sign of a corrupt mind.

found earlier in Alexander—and in Aristotle. If Porphyry practised the calculus of classes, he was not the first to do so.

What of the first part of the claim? It amounts to this: Porphyry's understanding of predicative propositions is fixed by the relations among the extensions of their terms. For example,

Every man is an animal

is taken to mean, or at least to be true if and only if,

Anything which is a member of the class of men is also a member of the class of animals.

Porphyry's use of such words as 'larger' and 'smaller' does perhaps suggest an 'extensionalist' understanding of this sort. But there is nothing else which does; and no Peripatetic ever developed an explicit theory of extensions or classes. The logical use of 'larger' and 'smaller' began in harmless metaphor; the metaphor quickly died; and the terms remained as items of familiar jargon: they are not evidence of metalogical theorizing.

Moreover, the language of 7.27–8.3 suggests something quite distinct from extensionalism and the logic of classes: it suggests the logic of parts and wholes, and a mereological understanding of terms and of predicative propositions. Porphyry states that a genus is a whole, a species both a whole and a part, an individual a part. And his words suggest that a most general item is not a part and an individual not a whole. 'Part' is a relational term: an item is not a part period but a part of something. Again, if X is a part of Y, then Y is a whole—or rather, a whole so-and-so (a whole cake, a whole face).¹³⁹

In addition, Porphyry says that whereas a species is a part of its genus, it is 'a whole (not of another item but) in other items'—not 'ἀλλον', genitive singular, but 'ἐν ἀλλοῖς', dative plural governed by a preposition. The commentators take Porphyry to be making a terminological point: Ammonius explains that you will use the plural rather than the singular because the whole is not found in any one of its parts, and the dative rather than the genitive since it is more normal Greek (*in Isag* 91.4–17—Ammonius does not mention the preposition).¹⁴⁰ The remark about the cases echoes a familiar Aristotelian passage.¹⁴¹

¹³⁹ For some remarks on ancient mereology see Barnes, 'Bits and pieces'.

¹⁴⁰ Boethius explains the transition from singular to plural (*in Isag*¹ 82.19–83.2; *in Isag*² 237.1–11). In the first commentary he uses the genitive plural, which is normal in Latin. In the second he uses the dative plural—but without comment. Nor does he comment on the preposition, which his translation does not render.

¹⁴¹ See *Cat* 6a37 (cf. 11b25); with e.g. Ammonius, *in Cat* 68.5–7; Boethius, *in Cat* 217c.

Perhaps there is more to the matter? Elsewhere Ammonius refers to a passage in the *Physics* where Aristotle discusses the different ways in which one thing is said to be ‘in’ another (*in Cat* 29.10–12). The passage begins thus:

In one way, as a finger is in a hand and in general a part in the whole. In another way, as a whole is in the parts—for the whole does not exist apart from the parts. (*Phys* 210a15–17)

Thus a whole is ‘in’ its parts in the sense that a whole does not exist unless its parts exists. Boethius repeats the Aristotelian point at *in Cat* 172B, and perhaps he took it from Porphyry.¹⁴²

Aristotle presumably means that a whole does not exist unless all its parts exist; and Porphyry presumably means that a whole is in all its parts. But surely a cup may lose its handle, which is one of its parts, without ceasing to exist? True—but the whole cup ceases to exist; that is to say, the mutilated item which remains is a cup, but not a whole (cup).¹⁴³ Suppose the cup is slightly chipped on the underside: the lost chip is surely a part, yet what is left is a whole cup. True; but perhaps the chip, though a part, is not a part of the cup?

However that may be, the application of this to genera and species is straightforward: if a genus is in its species as a whole is in its parts, then a genus does not exist unless all its species exist. But this is false: several species of insects die out every year—but the genus of insects crawls on. Nor did Porphyry, or any other ancient thinker, suppose that a genus depends in this way on each of its species. So the silence of the commentators was proper: the preposition ‘in’ is not to be pressed.

A whole is ‘in other items’: it is not ‘of another item’. Porphyry does not say that a whole is not a whole of anything—he says that it is not a whole of another item. In other words, if X is the whole of Y, then Y is not an item distinct from X: this is the whole of the regiment, that is the whole of my work for the term.

Porphyry gives us two relations among parts and wholes: a part is a part of a whole, and a whole is a whole in its parts. He might also have mentioned the converses of these two relations: a whole is a whole for a part, and a partition of parts is a partition of a whole. The former of the converses is perhaps alluded to by Boethius:

we call a universal—e.g. man or horse—a whole; for these items are wholes for their parts, i.e. for men and horses—which is why we call each man a particular man. (*div* 887D)

¹⁴² On ‘in’ see above, pp. 44–45.

¹⁴³ On mutilations see below, p. 285–286.

(In the same passage Boethius reminds us that ‘particular’ is the adjectival form of ‘particle’ or ‘little part’; and Latin terminology here echoes Greek.)

Species are frequently said to be parts in other ancient texts.¹⁴⁴ The locution is at best vacuous and at worst confused. But it would be as absurd to thunder on about the confusions as it would be to credit Porphyry with a mereological interpretation of terms and with the invention of mereological logic. He was no more a mereologist than he was an extensionalist. Rather—like many philosophers before and after him—he made use of a couple of handy metaphors which he did not squeeze for metalogical juice and between which he did not care to distinguish.

Individuals are assemblages of proper features. [7.19–27]

The remarks in 6.24–8.3 make various references to individuals. Porphyry has already noted that individuals are ‘predicated of only one item’ (2.17–18). At 7.19–27 he says a little more about them, first offering a few examples, and then explaining why individual items are so called.¹⁴⁵ The first example is uncontentious: Socrates. The second, introduced by ‘This white thing’, is either some particular white object or else an individual instance of the colour white. In the third place, the Greek manuscripts offer: ‘This person approaching, the son of Sophroniscus’. Boethius has: *‘hic veniens ut Sophronisci filius’*—‘this person approaching, e.g. the son of Sophroniscus’. There is a variant reading: ‘*et*’ for ‘*ut*’—‘this person approaching, and the son of Sophroniscus’. This last text is surely what Porphyry wrote;¹⁴⁶ and it is reasonable to think that the four examples are all descriptions of the same individual.

In other words, the four individuals are four individual predicates. There is nothing surprising in this—after all, the five items with which individuals are contrasted are all predicates. Moreover, the parenthesis, ‘should Socrates be his only son’, is rendered intelligible; for whereas the sentence ‘The son of Sophroniscus is an individual object—providing

¹⁴⁴ See further Additional Note (H).

¹⁴⁵ See above, pp. 77–80.—For Porphyry’s views on individuals see Chiaradonna, ‘Teoria dell’ individuo’.

¹⁴⁶ For ‘the person approaching’ see Aristotle, *APr* 43a35–36 (coupled with ‘this white thing’); Alexander, in *APr* 291.8.

that Sophroniscus has only one son' is absurd, the sentence ‘‘The son of Sophroniscus’’ is an individual predicate—providing that Sophroniscus has only one son’ makes good sense.

Such items are surely called ‘individuals [*άτομα*]’ because they hold of exactly one item: ‘man’ can be split or divided inasmuch it can be, and in fact is, true of several distinct items; ‘Socrates’ is unsplittable or individual inasmuch as it holds of a single item (cf Galen, *inst log* ii 4). But Porphyry says that they ‘are called individuals because each is constituted of proper features the assemblage of which will never be found the same in anything else’ (7.21–23). Not only is this a curious reason for calling anything ‘individual’: it also contains puzzles in itself.

First, Porphyry’s use of the word ‘proper feature [*ἰδιότης*]’ may suggest something like this: a term is individual if and only if it corresponds to the conjunction of a number of expressions, each of which holds of some one and the same item. But why postulate several such expressions where one would be enough? Presumably ‘proper feature’ should be taken in a relative, not an absolute, sense—as in the following passage:

The difference which objects have with respect to one another is there in virtue of a sort of proper feature [*ἰδιότης*], and that by which one thing differs from another will always be true of it and proper to it. (Alexander, *in Met* 295.32–34)¹⁴⁷

Thus an individual predicate, say ‘Socrates’ will be correlated with a set of expressions, E_1, E_2, \dots, E_n , where each E_i is proper to Socrates relative to some other item—to Plato, to Bucephalus—and the conjunction of the E_i s is true of Socrates alone. And this is what Porphyry says in the clause ‘the assemblage of which . . .’,¹⁴⁸ but it is a pity that Porphyry nowhere explains this (common) relative use of the word ‘proper’.

Elsewhere he expresses what is presumably the same thesis in rather different terms:

Socrates does not differ from Plato on account of specific differences but rather by the property of a concurrence of qualities. (*in Cat* 129.9–10)¹⁴⁹

¹⁴⁷ Cf e.g. Plotinus, *enn* II vi 3.4–6: ‘Each quality is a proper feature [*ἰδιότης*] inasmuch as it determines substances one in relation to another and has a proper character in relation to them’.

¹⁴⁸ So e.g. Ammonius, *in Isag* 90.2–3 (cf 90.16–23); Elias, *in Isag* 7.6.3–7.—At 7.24 the Greek MSS have ‘*αἱ ἀνταῖ*’ (as in line 25): Boethius does not translate, and I delete.

¹⁴⁹ Note also the following text: ‘The parts are said to be one in a different way, and not in the same way as Socrates; for he manifests in his own right a characteristic proper feature [*ἰδιότητα τοῦ χαρακτῆρος*], whereas the parts would not subsist without the whole but exist in such a way as to exist together with the whole. So Socrates remains one’ (*in Phys* 129 = Simplicius, *in Phys* 94.19–23).

Here the proper item is the assemblage or concurrence rather than each element of the assemblage; and the elements themselves are called, as neutrally as possible, ‘qualities’.¹⁵⁰

The theory which Porphyry sketches has been connected to a Stoic account of the meaning of proper names—but the link is tenuous.¹⁵¹ It has also been connected—in part because of its use of the term ‘assemblage [*ἀθροισμα*]’—with a theory which derives from Plato and which contends that perceptible substances are collections of qualities.¹⁵²

The theory had a long run: did Porphyry back it? Perhaps not. The term ‘assemblage’ shows nothing. It is not technical (nor is it particularly Platonic). It is used of groups of anything you like—of items of knowledge (Sextus, *PH* III 188), of numbers (Nicomachus, *introd. arith.* I xiv 3), of citizens (Sextus, *M* VII 41—and Euripides, *Orestes* 874), of clouds (Aristotle, *Meteor* 340a30–31).¹⁵³ Porphyry uses it elsewhere (*abst* I 29; *de an* 249 = Eusebius, *PE* XV xi 4; *quaest. Hom* xvi [107.14]), and never remarkably. Its appearance at 7.21–23 may be a reminiscence, more or less conscious, of Plato, *Thet* 157BC; but that need not bear upon the interpretation of the passage. Nor need we read much into the verb ‘be constituted [*συνέστηκε*]’, which may reasonably be read in an anodyne fashion.

Then his theory does not affirm that, say, Socrates is composed of snub-nosedness and baldness and the rest; rather it amounts to this:

There is a collection of predicates, E_1, E_2, \dots, E_n , such that the conjunction of the E_i s is true of an item if and only if the item is Socrates.

Just as ‘Socrates’ is true of an item if and only if that item has a certain set of proper features, so too—*mutatis mutandis*—with ‘man’: rationality is a proper feature which marks men off from beasts, mortality marks men off from gods.

Items are different in species if they are separated from each other by the account of their substance; they are different in number if the property of their peculiar subsistence is determined by a concurrence of accidents. (Simplicius, *in Cat* 55.2–5)

¹⁵⁰ Note that David, *in Isag* 167.26, tacitly replaces ‘*ἰδιοτήτων*’ by ‘*συμβεβηκότων*’; cf e.g. Simplicius, *in Cat* 55.6–5; Philoponus, *in APst* 437.17–18 (‘certain proper features and accidents’).

¹⁵¹ See Additional Note (A).

¹⁵² For this theory see Additional Note (I).

¹⁵³ The term does not carry any sense of disorder or randomness: see e.g. Alexander, *in Met* 426.22; Themistius, *in An* 4.1–3—with Hermias, *in Phdr* 171.8–15.

The difference between Socrates and man is that in the latter case, but not in the former, the bundle of predicates will be true of a plurality of items.

Does Porphyry mean that the collected E_i s do not, and never will, characterize anything other than Socrates? Or does he mean that they cannot characterize anything else? (His Greek—the optative with ‘*ἂν*’—is indeterminate. Boethius renders it by the Latin future, and my English follows his example. But the future indicatives may be read with a modal force.) Some ancient readers took the words without modal meaning. At any rate, ‘the Stoics’ are reported to have objected to Porphyry’s thesis by stating that the very same collections of characteristics will in fact recur in every cosmic cycle and in different cycles they will characterize different individuals (Arethas, *in Isag* 64.1-13). The note in Arethas may be muddled; for the Stoics generally maintained that the very same individuals return in each successive cosmic cycle.¹⁵⁴

In any case, there is a better argument against the non-modal interpretation: the assemblage of E_i s which constitutes (in the anodyne sense) Socrates is on a level with the assemblage which constitutes man. The latter assemblage constitutes the essence of man; it is a set of qualities the joint possession of which is necessary and sufficient for being a man; and the corresponding set of predicates consists of the elements of the definition of man. In the same way, possession of the Socratic assemblage is necessary and sufficient for being Socrates; and the corresponding set of predicates contains the elements of a quasi-definition of Socrates.

It is often urged that this is an impossible theory.¹⁵⁵ There is no set of predicates the joint possession of which is necessary and sufficient for being Socrates—any such set could, by its very nature, hold of something else, even if in fact it does not and will not. The objection was apparently made by Aristotle: as part of his critique of Plato, Aristotle urges that Forms, being singulars, cannot be defined:

For example, were someone to define you, he would say that you are a thin animal—or a pale one, or something else which will hold of another item as well. And if someone were to say that nothing prevents all these items from holding separately of several items while holding collectively of this item alone, then . . . (*Met* 1040a8-15)

¹⁵⁴ On this see e.g. Barnes, ‘Retour éternel’.

¹⁵⁵ More precisely, that the related Stoic theory is impossible. But one version of, or one element in, the Stoic theory is a crisp truth: ‘Plato’ designates an item if and only if that item is Plato.

Aristotle imagines something like the Porphyrean theory; and he indicates that he has objections against it—but the continuation of the text is hopelessly obscure and probably corrupt.

The issue was not addressed by Porphyry. Three rapid remarks may be allowed. First, it is not in general true that suitable sets of predicates cannot be found. Take the set {even, prime}: necessarily, the conjunction of the members of that set is true of an item if and only if that item is the number 2; or in other words, the individual predicate ‘2’ can be quasi-defined as ‘item which is both even and prime’. Secondly, whether or not suitable sets of predicates can be found for such humdrum individuals as Socrates will depend, trivially, on what items are allowed to count as predicates—do permissible predicates include relational predicates, indexical predicates, and so on? Thirdly, Porphyry’s illustrative individuals or individual predicates are strikingly diverse: it may be difficult to find a set of predicates which quasi-defines ‘Socrates’; but the same is not so for ‘the person approaching’ or ‘the son of Sophroniscus’.

§3: DIFFERENCES

There are three senses of ‘difference’. [8.8–17]

Genera and species having been discovered (8.4–6), Porphyry turns to the third member of his pentad: difference. ‘Let differences be so called . . .’ (8.8): imperative, not indicative. Then: ‘For one item is said to differ . . .’—indicative (and, in Greek, the same verb). The commentators think that Porphyry stipulates a threefold use for ‘difference’, appealing in justification to an actual threefold use of ‘differ’.¹ But although imperatives of this sort may stipulate a novelty, they need not do so²—and there is no reason to think that Porphyry is innovating or stipulating here.

Nevertheless, he is certainly tackling the noun ‘difference’ by way of the verb ‘differ’: a difference is that in virtue of which one thing differs from another. (See Galen, *diff puls* VIII 632—below, p. 353.) And his appeal to the verb appears to show that difference is distinguished in one significant way from the other four members of the pentad: a difference of Y is something by which Y differs from Z; or, if X is predicated differentially of Y, then X distinguishes Y from Z. When X is predicated generally or specially or properly or accidentally of Y, no Z interposes itself. Thus differences are relational in a way in which genera, species, properties and accidents are not.

Three senses of the word ‘difference’ or three kinds of difference?³ The commentators take the first option.⁴ The notion that a term may be used both ‘commonly [*κοινῶς*]’ and ‘properly [*ἰδίως*]’ is familiar from a hundred texts. Porphyry’s threefold sequence—common, proper, most proper (*ἰδιαιτατα*)—is rare but not unique. For example, Sextus remarks that ‘criteria . . . are so called in three ways: commonly, properly, most

¹ e.g. Ammonius, in *Int* 93.17–20 (who misunderstands the sense of ‘*κοινῶς*’ etc: *ibid* 92.8–9; so too Elias, in *Isag* 77.19–35).—Elias, in *Isag* 79.10–14, supposes that the terms ‘commonly’, ‘properly’, and ‘most properly’ are Porphyry’s innovations. Arethas gives the right interpretation followed by the wrong: in *Isag* 66.30–67.11.

² Despite commentator dogma, set out in exemplary fashion by [Elias], in *Isag* xxxix 30–33.

³ See above, pp. 50–52.

⁴ See e.g. Ammonius, in *Isag* 92.1–2; Elias, in *Isag* 77.8–12; David, in *Isag* 173.12–14 (with a reference to ‘Aristotle’s rule’: above, p. 50); al-Tayyib, in *Isag* 187, 198, 218.

properly' (*PH* II 15).⁵ The terminology suggests, and Sextus' example confirms, that if something is most properly F, then it is properly F, and if it is properly F, then it is commonly F—but not *vice versa*. In other words, it seems to be a matter of broader and narrower senses of a term. This gives some reason to think that Porphyry is distinguishing three senses of 'difference'. On the other hand, he does not say explicitly that the word is used in different senses; and he frequently talks of differences in the plural, once using the phrase 'the species of difference' (9.24)—and that is strictly incompatible with his intending a distinction of senses. The question will return.

Porphyry was not the first philosopher to spot differences among differences.⁶ Aristotle notes that not all differences are 'substantial and *per se*' (*APst* 97a11–14) and in *Metaphysics* Δ 9, he claims that

things are called different if, being in some way the same, they are diverse [*ἕτερα*] not in number but either in species or in genus or by analogy. Again, things of which the genus is other, and contraries, and items which have diversity in their substance. (1018a12–15)

The text is obscure, and its interpretation was contested in antiquity.⁷ Elsewhere, Aristotle expands a little on the first sort or sense of difference (*Met* 1054b22–1055a2). But there is no need to delve into the text; for it has no discernible connection with Porphyry.

In his essay *On the Difference of Pulses* Galen includes a short essay on the use of the word 'διαφορά' in Greek. He reports that

the word 'διαφορά' is used by all the Greeks—the old philosophers among them—of three items: more commonly, of genera, and also of species; and more properly, of items which are discovered in divisions and are neither species nor genera. (*diff puls* VIII 629–630)

⁵ See also *M* VII 31; [Galen], *hist phil* XIX 237; cf [Rufus], *diff feb* 601 (taken from *Isag*); [Galen], *hist phil* XIX 233 (*αἱρέσις*); anon, *music* Bellermanniana 21 (*ϕθόγγος*); scholia to Dionysius Thrax, *GG* I iii 217.11–17 (a fourfold distinction: common, most common, proper, most proper).—The threefold sequence has been taken to be Stoic: Additional Note (A).—For the superlative adjective 'most proper' note Aristotle, *PA* 658b33–35 (of the elephant's trunk).

⁶ Plato frequently uses the verb 'διαφέρειν' and the noun 'διαφορά' (he also has 'διαφορότης'); but the words receive no technical attention, even if a technical use is in the wings at e.g. *Tht* 208C; *Plt* 285B (cf [Plato], *def* 414D).—The remarks on differences in the grammarians (e.g. scholia to Dionysius Thrax, *GG* I iii 117.10–21) offer nothing of interest.

⁷ See Alexander, *in Met* 378.28–379.24.

Despite the ‘commonly’ and ‘properly’, this does not correspond to anything in Porphyry. But Galen is right to say that in Greek ‘difference’ often means ‘type’, and is applied to a genus or to a species—thus elsewhere he notes that

they say there are three genera of sinews—but there is no reason why you should not call them differences or species if you want. (*oss ingred* II 739)⁸

Porphyry might have mentioned the usage—he employs the word in this way himself (e.g. *in Cat* 58.12, 25–26; 71.25–26). And there are other senses of the word which neither Galen nor Porphyry notices—for example, ‘discord’ or ‘dispute’.⁹

At 8.9, 13, and 15 Porphyry talks of one item differing from a diverse item; but he notes that an item may be diverse ‘in relation to itself’—as the old Socrates in relation to the adolescent. So difference is a relation in which an item may stand to itself. Yet how can anything be different from itself? For if **a** differs from **b**, then there is something which holds of **a** and not of **b**—and in that case, **a** and **b** must surely be two distinct items?

Plato knew that, nevertheless, things can differ from themselves (*Parm* 164A). He found the notion odd, and posed certain puzzles (esp *ibid* 141A)—puzzles which his commentators attempted to resolve. (See anon, *in Parm* VIII 1–35, with the reference at line 32 to the interpretations of others.) Alexander says that, if we ask whether this thing is paler now than it was before, then

in this case too the objects of the inquiry are in a way two, getting their difference by the addition of time. For the same thing becomes one and then another by the addition of different times. (*in Top* 220.25–27)

If I judge that Socrates is paler today than he was yesterday, then I am—‘in a way’—comparing two objects: Socrates today and Socrates yesterday. But this suggestion, though never lacking its advocates, is nonsense: there is no such object as Socrates today—the phrase ‘Socrates today’ does not denote an object.

Porphyry’s account of the first and common sense of ‘difference’ is unilluminating: **a** differs from **b** if and only if **a** is distinct by a diversity

⁸ Cf e.g. *loc aff* VIII 193–194; *meth med* X 606; *comp med loc* XII 920.

⁹ e.g. in Sextus, as a synonym of ‘διαφωνία’; and in ordinary Greek—for example, in legal documents, as a possible cause of divorce (e.g. P.Oxy. 1473 (AD 201); 1273 (AD 260).

[έτερότης] from b.¹⁰ The commentators brighten it up by appeal to 8.12, where Porphyry talks of diversity in what something is like. They take Porphyry to mean that

a differs commonly from b if and only if a is distinct from b in respect of a diversity in what they are like

—in other words (so they say), in respect of a diversity in their accidents: ‘Instead of saying “accidentally” he said “in respect of any diversities in what it is like”, since accidents are predicated in answer to “What is it like?”’.¹¹ Common difference, then, is a particular type of difference—difference in virtue of some contingent or accidental feature.

Parts of the text sit well with this interpretation. But it cannot appeal to 8.12; for there the diversities in what something is like are attached to cases in which an item differs from itself—they are not introduced as a general condition on common difference. Moreover, the comparable use of ‘what it is like’ at 9.6 probably refers both to common and to proper differences, so that diversity in respect of what something is like will not be a characteristic of common differences alone. Finally, the phrase ‘when it is distinguished in any fashion’ (8.9) indicates that common difference is not restricted to any particular range of predicates—which, after all, is what the word ‘commonly’ itself suggests.

Hence it is better to construe common difference as difference in general. As Martianus Capella puts it, ‘a difference is an adequate discrimination of what you have before you’ (IV 346; cf V 478), and his lengthy illustration shows that any discriminating factor whatsoever counts as a difference. So as a first shot, the following definition might commend itself:

a differs from b if and only if for some F, Fa and not-Fb.

But this will not cope with items which differ from themselves. To accommodate them, we may take a hint from 8.11–12 and introduce some reference to time.¹² For example:

¹⁰ Elsewhere Porphyry seems to invoke a special sense of ‘diversity’ (*sent* 36); but there is no hint of that, or any other, special sense in our text.

¹¹ Ammonius, *in Isag* 93.25–94.2; cf. e.g. Boethius, *in Isag*² 241.18–242.3; Elias, *in Isag* 77.15–16; 78.15–16; Arethas, *in Isag* 70.1–6; de Libera, *Isagoge*^{*}, p. 55.

¹² If to time, why not also to other things—to aspects, places, parts, . . .? So that, say, Socrates may differ from Socrates inasmuch as he is bald (as to his pate) and hirsute (as to his chest).

a differs from **a** if and only if for some **F**, and for some times **t** and **t**^{*}, **Fa** at **t** and not-**Fa** at **t**^{*}.

And as a single account of common difference, which will cover both **a**'s differing from another item and **a**'s differing from itself, consider:

a differs from **b** if and only if for some **F**, and for some times **t** and **t**^{*}, **Fa** at **t** and not-**Fb** at **t**^{*}.

In effect, Porphyry notices two special cases of this formula: the case in which **a** is distinct from **b** and **t** identical with **t**^{*}, and the case in which **a** is identical with **b** and **t** distinct from **t**^{*}. There are two further cases—in one of which (when **a** is identical with **b** and **t** with **t**^{*}) the formula ‘**a** differs from **b**’ is always false.

If that is what it is for one thing to differ from another, what is a difference? A difference is a predicate. Hence, say:

X is predicated differentially of **Y** with respect to **Z** if and only if, for some **t** and **t**^{*}, **X** is true of **Y** at **t** and is not true of **Z** at **t**^{*}.

The clause ‘with respect to **Z**’ brings out the extra relationality of differences compared to the other four Porphyrean items. It is easy, and perhaps desirable, to introduce a formula in which the clause has been sublimated; thus:

X is predicated differentially of **Y** if and only if, for some **Z**, and for some **t** and **t**^{*}, **X** is predicated of **Y** at **t** and is not predicated of **Z** at **t**^{*}.

Call a term differential if and only if it is predicated differentially of at least one item. Then a term will be differential if and only if it is not always true of everything.

Proper difference is difference with respect to a special class of predicate, namely inseparable accidents. Thus:

a differsp from **b** if and only if for some **X**, and for some **t** and **t**^{*}, **X** is an inseparable accident of **a** at **t** but not of **b** at **t**^{*}.

Hence:

X is predicated differentiallyp of **Y** if and only if for some **Z**, **t** and **t**^{*}, **X** is an inseparable accident of **Y** at **t** but not of **Z** at **t**^{*}.

What, then, are inseparable accidents?

The formula ‘inseparable accident’ has been found strange, if not contradictory.¹³ After all, at 13.3-4, Porphyry reports, echoing Aristotle

¹³ See e.g. Gyekye, *Arabic Logic*, pp. 211-214.

(*Top* 102b6–7),¹⁴ that ‘accidents are what can hold and not hold of the same thing’. But an inseparable predicate is surely one which cannot fail to hold of its subject. So no inseparable predicate can be an accident—and Aristotle more than once says that if X is an accident of Y, then X is separable from Y (*Phys* 186b26–29; 192b24–27).

Nonetheless, inseparable accidents are anchored in the text; and at 12.25–27 Porphyry will say that ‘accidents . . . are divided into two: some are separable and some inseparable’. Moreover, the things are hawsered to a Peripatetic bollard; for according to Alexander,

Aristotle calls accidents in their own right [*καθ' αὐτὰ συμβέβηκότα*] inseparable and proper and nearly substantial. (*in Met* 176.24–25)¹⁵

Accidents in their own right—or *per se* accidents as they are usually called—are familiar Aristotelian beasts:

Things are said to be accidents in another way too—i.e. what holds of each thing in its own right without being a part of its substance—e.g. having two right angles of triangle. These accidents can be eternal whereas none of the others can (this has been explained elsewhere). (*Met* 1024a30–35)

X is a *per se* accident of Y if and only if X is necessarily true of anything of which Y is true and yet does not appear in the definition of Y.

That there are inseparable accidents is good Peripatetic doctrine. Whether such accidents are simply to be identified with *per se* accidents is another question, which may be postponed. It is appropriate to postpone also the question of how inseparable items can be accidents.¹⁶

One or two of Porphyry’s illustrative examples raise questions. Blue eyes pose a problem for editors of Boethius.¹⁷ The hardened scar is a proper rather than a common accident—and Porphyry is doubtless

¹⁴ Cf e.g. *Phys* 186b19; *Met* 1025a14–16—see below, pp. 224–228.

¹⁵ Cf e.g. *in Top* 49.10–12; 175.15–17; Boethius, *div* 88op; *in Int*² 384.25–27.—According to Ebert, ‘Accidents’, p. 141, ‘the division of accident into two kinds has no basis in Aristotle’s writings’: Aristotle himself, *pace* Alexander, does not talk explicitly of inseparable accidents; but he comes close to doing so (see esp *Phys* 186b18–23), and the division is based on Aristotle even if it is not found in him.

¹⁶ See below, pp. 224–228.

¹⁷ At 8.14 his translation offers ‘*caecitas oculorum*’. (For the same phrase in a slightly different context see *in Cat* 243c.) Did Boethius misunderstand his text? Or did he read ‘*γλαύκωσις*’? Or did he write ‘*caesitas oculorum*’? The last option will require further emendations in the texts of both commentaries; but it is supported by *in Isag*² 246.1. See Magee, *Boethii*, p. 97.—Being blue-eyed is frequently mentioned in Aristotle’s biological works; but as far as I have noticed, it is never produced by him, or by Alexander, as an example of an accident.

thinking of Odysseus and the mark of the boar.¹⁸ At 9.8-10, Porphyry cites movement as a separable characteristic. Some anonymous critics objected that this was not always so: the movement of stars and of souls is inseparable. (See David, *in Isag* 183.22-184.6; Arethas, *in Isag* 75.12-17.) The critics are right; but their remark may be construed as a gloss on Porphyry's text rather than as a refutation. To say that 'move' is a separable predicate is to say that it is predicated separably of something; and that does not imply that it is predicated separably of everything of which it is predicated. In fact, 'move' is both separable and inseparable.

Most proper difference, like proper difference, is difference with respect to a type of predication.

a differs_{MP} from **b** if and only if for some X, and for some t and t*, X is specifically true of **a** at t and not of **b** at t*

And:

X is predicated differentially_{MP} of Y if and only if there is a Z such that X is predicated specifically of Y and not of Z.

Porphyry has already used the technical term 'specific' without explanation (6.15)—nor does he explain it here. The word was perhaps created by Aristotle:

Similarly, if it is true of the object but does not make a species when added to the genus—for it is clear that it will not be a specific difference of the genus; for every specific difference together with the genus makes a species. (*Top* 143b6-9)

The adjective 'specific [*εἰδοποιός*]' is constructed from the phrase 'make a species [*εἰδός ποιεῖν*]'. It became part of the common jargon of imperial philosophy.¹⁹

¹⁸ See Homer, *Od* XIX 390-394—so e.g. Elias, *in Isag* 78.27-28; cf Aristotle, *Poet* 1454b23-28. I have not found the scar used as an example outside *Isag*—‘σκιρροῦ’ is the standard medical term for ulceration. The compound ‘ἐνσκιρροῦ’ is rare; but see e.g. Xenophon, *equ* iv 2; Arius Didymus, *apud Stobaeus*, *ecl* II vii 10e (a metaphorical use).

¹⁹ See e.g. Alcinous, *didasc* i [152.23]; Alexander, *in Top* 50.18; 314.14. (The adjective, and the verb 'εἰδοποιεῖν', are also used of form-making: e.g. *in Ptol harm* 12.14.)—[Galen], *ad Gaur* iii 1, declares that, in order to decide the status of an embryo (is it an animal or is it a plant?), 'we must set before our view the specific differences of plants and animals'; and iii 2 then lists certain properties, *τόια*, of each group. Is this a gross confusion, or merely a loose use of the term 'specific difference'? In either case, does it tell against Porphyrean authorship?—Compare Clement, *strom* VIII vi 21.1, where the notion

A specific predicate is one which, when added to a genus, makes a species. So:

X is specifically predicated of Y if and only if there is a Z and a W such that Z is predicated specially of Y and W is predicated generally of Y and Z is equivalent to 'W which is X'.

It follows that **a** and **b** differ most properly if and only if they belong to different species. Suppose, first, that **a** and **b** belong to different species—say, **a** is a man and **b** a mandrill. Then 'rational' holds specifically of **a** and not of **b**. Hence **a** differs most properly from **b**. Again, suppose that **a** differs most properly from **b**. Then there is some predicate X which holds specifically of **a** and not of **b**. Hence **a** and **b** belong to different species.

It does not follow that, if a specific predicate holds both of **a** and of **b**, then **a** and **b** belong to the same species. For a specific predicate may hold non-specifically of some items. My cat, Ratty, is eminently rational—but not specifically so. He is a rational animal; but 'rational' is not predicated specifically of him.

The common formula for difference was this:

X is predicated differentially of Y if and only if, for some Z, and for some t and t*, X is predicated of Y at t and is not predicated of Z at t*.

Different kinds of difference can then be given by formulas of the form:

X is predicated differentially_K of Y if and only if, for some Z, and for some t and t*, X is predicated_K of Y at t and is not predicated_K of Z at t*.

The common formula licenses the production of indefinitely many particular formulas. Porphyry considers two of them, the proper and the most proper.

You might think of others—say, of generic difference, or difference in respect of generic predicate (where X is a generic predicate if and

of a difference is first illustrated by the example of 'laughing' (the stock example of a property: below, p. 208), after which Clement says expressly that 'some say that a difference presents a property. And insofar as what possesses the difference differs from all other items, it holds of it alone and is counterpredicated of the object in the definitions'. (The text is uncertain, the sense clear.)—At 8.17 I excise 'ποιότητι'. [Elias], in *Isag* xxxix 34, says that 'he wrongly calls rational a quality: rational is a substantial difference, whereas qualities are accidents'. This is not a serious objection (see Additional Note (L)). But 8.21–9.2 (cf. e.g. in *Cat* 85.16–17) shows that with 'τῇ τοῦ λογικοῦ' we should understand 'διαφορᾷ'.

only if, for some Y, ‘Y which is X’ is a general predicate). Generic predicates were sometimes called ‘general differences’. Thus Galen distinguishes special from general differences ($\epsilonἰδικός$ or $\kappaατ’\epsilonἰδος$ vs $\gammaενικός$ or $\kappaατὰ\gammaένος$)—and allows that a difference may be more special or more general (*diff puls* VIII 625). The same distinction is found in the grammarians (e.g. Apollonius Dyscolus, *pron* 8.27–32). All generic differences are specific differences, but not *vice versa*.

Return to an earlier question: does Porphyry distinguish three senses of ‘difference’ or three sorts of difference? ‘Differ’, taken commonly, ‘differp’ and ‘differ_{MP}’ differ in sense. Hence if ‘difference’ relates sometimes to one and sometimes to another of these three verbs, ‘difference’ has three senses. On the other hand, ‘differ’ as it occurs in ‘differ’, taken commonly, in ‘differp’ and in ‘differ_{MP}’ has one sense—namely, the sense given by the general formula for differing. Hence if ‘difference’ relates to the verb ‘to differ’, it has a single sense. Nothing of importance turns on a decision between these two options.

In any event, common differences, proper differences, and most proper differences do not form a hierarchy in the way in which Sextus, *PH* II 15, and the parallel texts suggested. Proper differences are differences, and most proper differences are differences. But most proper differences are not proper differences (though if a and b differ most properly, then then will also differ properly).

Some of Porphyry’s commentators say that only most proper differences are genuine differences—other so called differences are mere accidents.²⁰ Alexander had said something similar:

A difference in the strict sense [$\kappaυρίως$] is one in virtue of which a genus is split into species; for not everything which differs from something differs by what is called a difference in the strict sense: in the case of most things, their difference from one another is in virtue of some accident—but such items are called differences in a more common sense [$\kappaοινότερον$]. (*in Top* 47.29–48.1)²¹

It is true that any proper difference of a is an accident of a—and hence belongs to the fifth of Porphyry’s five items. It is also true that when ancient logicians talked about differences, they generally had in mind—as Porphyry will shortly tell us—most proper differences.

Or rather, it was what I have called specific predication on which they fixed their gaze. Specific predication is explained without reference to

²⁰ e.g. al-Tayyib, *in Isag* 229, 237.

²¹ Cf e.g. *in Top* 115.4–6; Clement, *strom* VIII vi 18.3.

the concept of difference. Porphyry might have made specific predication his third item: he had no need to introduce the general and relational notion of differing.

A most proper difference makes something not merely diverse but another item. [8.17–9.2]

An item differs from a diverse item (*ἕτερος*). Any difference between *a* and *b* ensures that *a* is diversified (*ἕτερος*) from *b*. A common or a proper difference ensures that *a* is otherlike (*ἄλλοιος*) in relation to *b*. A most proper difference—a specific difference—ensures that *a* is other (*ἄλλος*) than *b*. The four Greek words go in two pairs, and my English translations mirror the fact. The translations are stilted: in most contexts, ‘other’ or ‘different’ is an idiomatic version of any of the four words; but here it is necessary to mimic the Greek.

Porphyry writes as though the words had familiar and distinct senses. At any rate, he offers no explanation for any of them. In everyday Greek there seems to have been no difference—or no pertinent difference—among them.²² ‘Diversified’ and ‘otherlike’ are used interchangeably by Herodotus and thenceforward.²³ ‘Diverse’ and ‘other’ are used promiscuously—not only in non-philosophical texts but also by Plato and by Aristotle and by Porphyry himself.²⁴ And Plato’s *Parmenides* contains the following little exchange:

—Don't you say 'other' and 'diverse' of the same thing?

—I do. (164B)

In our text, Porphyry cannot be relying on ordinary Greek usage.

Nor are any pertinent technical uses of the words to be found.²⁵ What can be inferred from the text of Porphyry itself?

²² Ammonius makes a distinction between ‘ἀλλοίωσις’ and ‘ἔτεροίωσις’, which is dubious in itself and of no relevance to Porphyry (*ad fin. voc. diff.* 28; cf. 316). He also has this to say: ‘ἀλλος and ἔτερος are different: ἔτερος is said of two items, ἀλλος of more. ἀλλος and ἀλλοῖος are different: ἀλλος is said of individuals, ἀλλοῖος of natures’ (30–31; cf. 198). Even if Ammonius is reporting usage rather than inventing it, his distinctions are of no pertinence here.

²³ See e.g. Herodotus, II 35; note scholia A to Homer, *Iliad* V 638 ('Tyrannio reads „ἀλλοῖον“ [for ‘ἀλλ’ οἶον] in the sense of ἔτεροιον').

²⁴ e.g. in *Cat* 79.17 + 21; 83.4; for Plato, e.g. *Soph* 256c; for Aristotle, see Bonitz, *Index* 34b30–36; 200b9–20.

²⁵ See Additional Note (J).

It is plain that if something is otherlike, then it is diverse, and that if something is other, then it is diverse. It is also plain that if something is diverse it does not follow that it is other. It is plausible that something is diversified if and only if it is diverse. But—and here the two pairs of terms are asymmetrical—it is certainly not the case that something is otherlike if and only if it is other. So perhaps diversity is the generic notion, with ‘other’ and ‘otherlike’ as species? Or perhaps being other entails being otherlike? The ancient commentators took the latter option.²⁶ The decision turns on the word ‘only [*μόνον*]’ at 9.1, 2 and 5: does ‘make only otherlike’ mean ‘make [otherlike and not other]’? Or does it mean ‘make otherlike and not make other’? The former seems more probable, and in that case we should side with the ancient commentators. True, it is then difficult to see a difference between diversity and otherlikeness—but Boethius, for one, was unmoved by this, translating both words by the same Latin term, ‘*alteratum*’.

Thus:

a is diverse from b if and only if a is diversified from b if and only if a is otherlike than b.

If a is other than b, then a is diverse from b.

It is not the case that if a is diverse from b, then a is other than b.

Diversity, at a sporting guess, is the same as difference—as common difference. In other words, a is diverse from b if and only if there are X, t and t* such that X is true of a at t and not of b at t*. But what is otherness?

The commentators say that otherness is diversity with respect to substantial or essential properties.²⁷ The interpretation rests on two passages. At 9.14–15 Porphyry says that most proper differences ‘are taken in the account of the substance and . . . make the item other’. The commentators take the second clause to be explicatory of the first; and the first clause indicates that the differences are in respect of essential predicates. But there is no reason so to construe the clauses—indeed,

²⁶ See e.g. Boethius, *in Isag*² 244.19–20 (‘what is other is otherlike, but not everything which is otherlike can be called other’); David, *in Isag* 177.20 (‘where it is other, there it is also otherlike’). See also Boethius, *div* 880d–881a, with Magee, *Boethii*, pp. 93–95.

²⁷ So e.g. Ammonius, *in Isag* 95.4–5 (‘we call ‘other [*ἄλλα*] items which differ in substance . . . e.g. man, horse’); cf Boethius, *in Isag*² 245.1–4; Elias, *in Isag* 78.2–3.—‘In <8.17–9.6> the contrast seems to be between specific difference (“other” [i.e. *ἄλλος*]) on the one hand, and merely accidental differences that do not affect a thing’s individuality (“otherwise” [i.e. *ἄλλοιος*]) on the other. Numerical difference is not discussed’ (Spade, *Five Texts**, p. 7 n. 10).

the construal makes Porphyry explain the dark by the darker. At 8.21–9.1 Porphyry says that ‘when the difference of rational approaches animal it makes it other and makes a species of animal’. Here too the second clause—which is omitted by most Greek MSS and not printed by Busse—is read by the commentators as an explanation of the first: hence to make something other is to make a species, and otherness is special—and therefore essential—diversity. But the construal is mistaken: the second clause—which should be retained—plays a more serious role in Porphyry’s argument, for it explains why differences which make items other have been called specific.²⁸

In any event, otherness certainly holds between individuals (8.10); and it is natural to guess that it is non-identity: Socrates is other than Plato, that is to say: Socrates is not identical with Plato. Differences which are most proper or specific induce something more than diversity, namely non-identity. If Blaydes was hirsute and Calverley bald, then it follows that they were otherlike, but not that they were two different chaps. If Socrates was snub-nosed and Plato hook-nosed, ditto. But if Socrates was specifically rational and Donald is specifically non-rational, then they are two different persons and not merely otherlike. To be sure, Socrates and Plato were two distinct Greeks (and not merely otherlike). But this does not follow from the fact that Socrates was snub-nosed and Plato hook-nosed; for (given that such features are accidents) one and the same subject may be both snub-nosed and hook-nosed (at different times).

A specific difference ‘makes’ a species, and in the present paragraph Porphyry’s language continues in the causal mode: differences ‘approach’, they are ‘added’ to things, they ‘make’ things diversified or otherlike or other. Elsewhere the causal language returns;²⁹ and it is sometimes startling:

These differences are generative [$\gamma\epsilon\nu\nu\eta\tau\iota\kappa\acute{\alpha}$] and productive of animal, and are higher than animal—so they are also predicated of animal. (in *Cat* 85.18–20)

Making here is not a form of changing: Porphyry does not mean that if rationality is added to some animal—to a duck, say—, then that animal changes species. For items cannot change species. Rather, a difference

²⁸ At 8.19–20 some MSS omit the sentence ‘ $\tau\hat{\omega}\nu\gamma\grave{\alpha}\rho\delta\iota\alpha\phi\sigma\hat{\omega}\nu\ldots\ddot{\alpha}\lambda\lambda\grave{\o}$ ’, which adds nothing: Tricot, *Isagoge**, p. 27 n. 1, deletes the words.

²⁹ Below, p. 180.—At 8.21–9.2 Porphyry puts the causal verbs into the past tense (cf 8.17; 10.16–18; 11.21–12.1). I assume that these are cases of ‘past for present’ (above, p. 87 n. 102).

is ‘added’ to an undifferentiated genus and thereby produces a species: just as the sculptor imposes the shape of a charioteer on a formless mass of bronze, so the difference of man imposes its shapely self on a formless animal. A specific difference ‘takes the genus and, using it as matter, effects the species’ (Arethas, *in Isag* 71.16–17).³⁰

Alexander too states that the difference ‘makes’ the species (e.g. *in Top* 113.22–23)—after all, Aristotle says so, and that is what the word ‘specific’ means.³¹ And his works contain such phrases as ‘the formula which came to be in the underlying matter and made it bronze’ (*an* 87.10–11). But he is aware that this is close to nonsense:

A genus is not such as to pre-exist the species in time—it is not that first an animal comes to be and then from it a man: rather, man and animal are simultaneous. (*in Top* 345.25–346.1; cf *mant* 121.32–35)

Porphyry’s language in 8.17–9.6 suggests the absurd notion which Alexander scouts; and at 15.16–18 he explicitly says that genera must ‘be there beforehand’. Does he mean it seriously? More later.³²

It is the most proper differences which occupy philosophers. [9.2–6]

They do so because it is they which occur in divisions and in definitions (cf 10.19–21)—trivially for divisions, less so for definitions. As for differences which make things only otherlike, they set up ‘diversities [$\epsilon\tau\epsilon\rho\tau\eta\tau\epsilon\varsigma$]’ and ‘changes in what it is like’.³³ ‘Diversities’ picks up 8.9 (cf 8.18) and common differences; ‘changes’ has in mind 8.12–13 and cases of self-difference. Some commentators connect diversities with inseparable accidents and changes with separable accidents, a suggestion which David, *in Isag* 178.6–7, briskly dismisses.

³⁰ For the analogy between genus/difference and matter/form see 11.12–17 and notes.—Sometimes it is the genus rather than the difference which has the maker’s rôle: ‘The genus of the gods makes the species of the gods from itself’ ([Apuleius], *Ascl* iv).

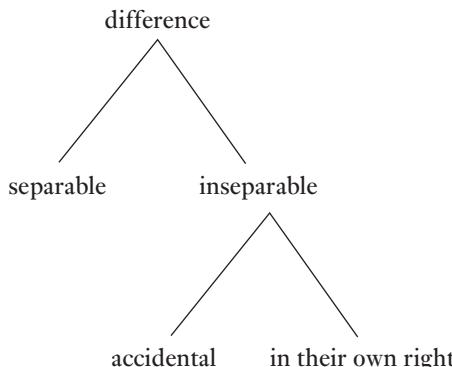
³¹ Aristotle also says that ‘he who defines will place the item in its genus and attach [$\pi\rho\sigma\alpha\pi\tau\epsilon\upsilon$] the differences’ (*Top* 139a28–29; cf 143a23), and he talks of the difference being ‘added [$\pi\rho\sigma\iota\theta\epsilon\mu\epsilon\eta\eta$]’ to the genus (143b6–7). But here it is we who do the adding and attaching—and the work is linguistic.

³² Below, pp. 256–258.

³³ At 9.6 Busse prints ‘τοῦ πῶς ἔχοντος’ with a circumflex on the omega; in his Addenda he corrects to an accentless ‘πῶς’. Better, read ‘ἔχειν’ for ‘ἔχοντος’?—In any event, there is no hint of Stoicism in the formula: Additional Note (A).

Differences are either separable or inseparable; and inseparable differences are either accidental or *per se*. [9.7–23]

You might expect Porphyry to turn now to the philosophically fascinating type of difference. Instead, he makes a new start,³⁴ eventually repeating at 10.19–21 the verdict of 9.2–6. Why a new start? Was there something wrong, or obscure, or defective in 8.8–9.6? The new start offers a division of differences, thus:³⁵



What novelties does this bring?

First, there are now a genus and three species (9.24). Differences which are inseparable and in their own right make things other, and they are to be identified with most proper differences. Inseparable accidental

³⁴ ‘Beginning again . . .’: this sort of formula is common in Aristotle, and intelligible where difficult material is being teased out. It is unexpected in an introductory text; but cf. e.g. Nicomachus, *intr. arith.* II xvii 1; Galen, *puls. ingred.* VIII 462.

³⁵ The commentators speak of three divisions of differences: (A) common, proper, most proper; (B) otherlike-making, other-making; (C) separable, inseparable accidental, inseparable in their own right. (See e.g. Boethius, *in Isag.*¹ 87.22–26; *in Isag.*² 249.5–12.) In Porphyry’s text only (C) is presented as a division.—At *div.* 880D–881A Boethius has another division: differences are in their own right (i.e. form part of the substance of the item, or are specific) or else accidental. If they are accidental, they are either ‘consequent’ (i.e. *per se* accidents, necessary concomitants which do not form part of the definition) or else ‘departing’ (i.e. which [come and] go).—Ammonius offers a different schematization. Differences are either separable or inseparable, and either otherlike-making or other-making. Hence there are, in principle, four possible types of difference: (1) separable and otherlike-making; (2) inseparable and otherlike-making; (3) separable and other-making; (4) inseparable and other-making. Type (3) is incoherent, so that we arrive at Porphyry’s three types. See *in Isag.* 95.13–96.9.

differences, which make things otherlike, are generally identified with proper differences. The ancient commentators take separable differences to be the same as common differences,³⁶ so that the novelty in the new start is the introduction of the general notion of difference. If, against the commentators, common differences are interpreted as differences in general, then the novelty consists in the recognition of a new species of difference. And if in the preceding paragraph common differences were in a state of oscillation, then the new start stops the shilly-shally. In any event, there are now four items—a genus and three species—where before there were three.

Secondly, the distinction between accidental differences and differences in their own right—*per se* differences—is new. Even if the notion of a *per se* accident lies behind the earlier paragraph, that notion is quite distinct from the notion of a *per se* difference.³⁷

The new division has an air of solidity to it. But it is a delicate structure. Ratty and Donald are different. They differ in many respects, one being that Ratty is a cat and Donald is not. In other words, ‘cat’ is a differential predicate of Ratty with respect to Donald. What sort of differential predicate? Not separable, and not accidental. Hence a *per se* inseparable difference. But such items are specific differences; and ‘cat’ is not a specific difference but a species. More generally, special predicates differentiate items in one species from those in others; hence they are differential predicates. They must therefore belong to one of Porphyry’s three species of difference. They can only be *per se* inseparable differences.

A parallel question might have been raised in connection with 8.8–9.6; but there it is less embarrassing inasmuch as the typology of differences does not expressly offer itself as exhaustive. Here the question is acute. It is no use saying that the division divides differences, and not predicates in general; for general and special predicates are incontrovertibly differential predicates, so that they must be found a place in any typology of differences.

Earlier, it was suggested that Porphyry need not have introduced the general notion of difference in order to explain the third of his five items: the concept of specific predication would have been enough.³⁸ Now it might be added that Porphyry would have done better to avoid the general notion of difference, which has only put him in the soup.

³⁶ See above, p. 158.

³⁷ *pace* de Libera, *Isagoge**, p. 56. *Per se* differences are specific, *per se* accidents not.

³⁸ Above, pp. 163–164.

At 9.7–14 Porphyry introduces and illustrates the three species of difference; and at 9.14–23 he characterizes more closely the two kinds of inseparable differences. Inseparability has already been touched on, and will arise again later.³⁹ Here it is enough to note that X is predicated inseparably of Y if and only if, necessarily, if Y is true of an item, then X is true of it. ‘Rational’ is predicated inseparably of ‘man’ inasmuch as, necessarily, if ‘man’ is true of something, then so is ‘rational’. The nature of the necessity here invoked will be considered in a later context. Here it is appropriate to say something about ‘in their own right’ or ‘*per se*’.

Consider the formula

X holds of Y in virtue of (*κατά*) Z

Replace ‘Z’ by a reflexive pronoun, thus:

X holds of Y in virtue of itself

—or:

X holds of Y in its own right,

—or:

X holds of Y *per se*.

These formulas are ambiguous, ‘itself’ (or ‘its’ or ‘*se*’) referring either to X or to Y. In Greek, such ambiguity is sometimes avoided by grammar: the number or the gender of ‘itself’ may link it to X rather than to Y or to Y rather than to X.

In our text, the number and gender are usually decisive. Thus at 9.11, 9.25–10.1, and 10.1, 2 and 3 Porphyry uses the feminine plural, ‘*καθ’ αὐτάς*’ (agreeing with ‘the differences’); and at 9.12, and 13–14 he uses the neuter singular (agreeing with the particular difference which he has mentioned). In one or two places, the manuscript tradition does not conform to this pattern; but Busse has not unreasonably homogenized the text.⁴⁰ The formula which the pattern imports—‘X holds of Y in virtue of X’—is intelligible in itself and attested in Aristotle. What it amounts to is this: the definition of X is such as to ensure that it is Y of which

³⁹ Above, pp. 159–160—and below, pp. 224–228.

⁴⁰ So 9.14 (where Busse corrects ‘*αὐτό*’ to ‘*αὐτάς*’) and 16/7 (ditto, Busse here invoking the authority of David [i.e. the lemma at *in Isag* 184.25]). Note also the variant readings at 9.11 and 10.3.

X holds.⁴¹ For example, ‘odd’ holds of numbers in virtue of itself—that is to say, the definition of ‘odd’ ensures that if ‘odd’ holds of Y, then Y is a number.

So if ‘rational holds of man in its own right’ (9.11–12—and not ‘in his own right’), then being rational is such that only men can be it. (And in general, if X is specific of Y, then Y is true of everything of which X is true.) But this is not Porphyry’s view: ‘rational’ holds of gods as well as of men; and in general, a difference may hold of a plurality of distinct species.⁴² Plainly, a difference holds of its species in virtue of the species and not in virtue of the difference; that is to say, rationality holds of man in virtue of the nature or definition of man, not in virtue of the nature or definition of rationality. Porphyry appears to be—and perhaps is—scrupulous as to the number and gender of ‘itself’. But the scrupulosity does not indicate ‘in virtue of X’ rather than ‘in virtue of Y’: by Porphyry’s time, ‘καθ’ αὐτُς’ had become an honorary adjective, taking its number and gender from its accompanying noun.

In any event, Porphyry states explicitly that *per se* differences ‘are taken in the account of the substance [οὐσία]’ (9.14–15): they are parts of the definition of their subjects, whereas accidental differences are not said⁴³ in the substance. It is not a tautology to say that a *per se* predicate of something is part of its definition. *Per se* accidents are not essential to their subjects. Nor are they rare birds: all the predicates which any science proves to hold of anything are *per se* accidents—they are deducible from, but they do not form part of, the definition of their subjects.

You must divide by items in the substance of the thing, not by its *per se* accidents—as if you were to divide shapes into those with angles equal to two right angles and those with angles equal to more (it is an accident of triangles to have their angles equal to two right angles). (Aristotle, *PA* 643a27–31)

If not all *per se* predicates belong in the definition of their subjects, why think that *per se* differences do?⁴⁴ It is a matter not of argument but of

⁴¹ This is the second sort of *per se* predication explained at *APst* 73a34–b4: see Barnes, *Posterior Analytics*, pp. 112–114.

⁴² See below, pp. 191–193.

⁴³ At 9.16 I read ‘λέγονται’: the tradition shows four or five variants; Busse prints ‘λαμβάνονται’ (as at 9.14), but confesses a leaning towards ‘λέγονται’, which was Boethius’ text. (It is also found in a lemma in David, *in Isag* 184.16; but the text of the commentary at 184.20 and 24 shows that David himself read ‘λαμβάνονται’.)—At 9.14 ‘προσοῦσαι’ might seem odd (Boethius has ‘quae . . . sunt’: perhaps he read ‘οὖσαι’?); but it is protected by e.g. 19.18–19.

⁴⁴ One of Porphyry’s examples—being receptive of knowledge—is a property according to Aristotle (*Top* 134a14–16); and hence not a *per se* difference.

decision: Porphyry has decided to restrict the term ‘in its own right’, when it is applied to inseparable differences, to items which belong in the substance.⁴⁵ X is predicated differentially of Y in its own right if and only if Y is by definition ‘Z which is W₁ and . . . and W_n’ and X is one of the W_is.

Per se differences make things other and not merely otherlike. If X holds differentially in this way of a, then it is essential to a and a can never be without it. Hence if X is true of a at t and not of b at t*, a and b are not identical but other.

Next, at 9.16–23, Porphyry claims that *per se* differences do not admit augmentation and diminution, or ‘the more and the less’.⁴⁶ The point is repeated (18.11–13; 19.5–7; 20.3–5). The same is said of genera (9.18–19—repeated at 16.2–6 and 17.6–8); and also, later, of species (18.11–13; 20.14–15; 21.15–17) and of properties (16.2–6; 19.5–7; 20.14–15; 22.9–10). Accidents alone, of the five Porphyrean items, augment and diminish (9.17–18, 22–23; 17.6–8; 20.3–5; 21.15–17; 22.9–10). Porphyry sometimes expresses the point in terms of ‘receiving the more and the less’ (9.17, 19; 20.4; 22.10), which was Aristotle’s idiom (e.g. *Cat* 6a19–20, 25, b19–20); more often he employs the language of augmentation (*ἐπίτασις*) and diminution (*ἀνεστις*) (9.18, 21, 22; 17.7; 20.4; 21.17); and frequently he makes his point by affirming or denying that items are said ‘equally’.⁴⁷

ἐπίτασις is the stretching or extension of a cord or string, and *ἀνεστις* is its relaxing—the words have a common musical application (e.g. *in Ptol harm* 33.13–15).⁴⁸ Aristotle uses them in a different context (see e.g. *Cael* 289a19); and he frequently makes use of the associated verbs.⁴⁹ For example:

Inasmuch as health, although it is determinate, admits the more and the less, why should the same not be true of pleasure? Not everyone has the same

⁴⁵ Ammonius saw the point—note the ‘i.e.’ in the following text: ‘If a difference is inseparable, then either it holds in its own right, i.e. is compleutive of the substance of the subject, or accidentally, i.e. contributing nothing to the being of the thing’ (*in Isag* 92.10–13).

⁴⁶ See also e.g. *in Cat* 137.27–138.6; *in Phys* 160 = Simplicius, *in Phys* 864.18–23; Plutarch, *prim frig* 946b; Aspasius, *in EN* 50.16–18; Alexander, *in Met* 418.19–22; Sextus, *PH* II 40.—Solère, ‘D’un commentaire’, gives a history of the later fortunes of augmentation and diminution.

⁴⁷ See below, pp. 263–264.

⁴⁸ ‘Stretch’ and ‘relax’ do not work in English for the transferred uses of ‘*ἐπίτασις*’ and ‘*ἀνεστις*’; from several possible versions I have chosen one which has musical associations.

⁴⁹ See Bonitz, *Index* 61a22–52; note also the use of ‘*ἐπιθέσις*’ at *Cat* 10b28; 13a25–29.

balance nor is there always one single balance in one person—rather, it diminishes, and yet remains for a certain while, and it differs by the more and the less. (*EN* 1173a23–28)

Similar things are found in most later philosophers: according to the Stoics, ‘every good item is supremely eligible and admits neither augmentation nor diminution’ (Diogenes Laertius, VII 101); according to the Platonists, ‘perfect virtues plainly neither augment nor diminish; but vices admit augmentation and diminution—one man is more foolish and more unjust than another’ (Alcinous, *Didask* xxx [183.22–25]).⁵⁰

Porphyry’s claim in our text is repeated by Dexippus, who says that he will indicate

the complete distinction between separable accidents and differences. For diminution and augmentation are observed in connection with substantial accidents—if an Ethiopian went to other places there would be a diminution of his black body, and the whiteness of milk is less and that of snow greater. But no-one will observe the more and less in connection with differences—one biped is not more biped than another, nor one footed item more footed. (*in Cat* 48.11–19; cf Simplicius, *in Cat* 98.13–17)

But what is it for a predicate to admit the more and the less, to augment and diminish?

The passage in Dexippus suggests the following interpretation: X does not augment or diminish inasmuch as it makes no sense to say ‘a is more [less] X than b’. Terms expressing specific differences do not admit comparatives. Some Aristotelian texts suggest this reading (e.g. *Cat* 3b33–4a9); and it was advocated by some of Porphyry’s commentators: thus ‘we do not say more, or less, rational’ (Elias, *in Isag* 79.27–28), whereas ‘we say more white and less, more snubnosed and less’ (*ibid* 98.30–31). But this cannot be right. After all, ‘rational’ expresses a difference; and yet the adjective has a familiar comparative form (1.15).

Perhaps, then, although ‘more X’ makes sense, nonetheless, if X is a differential predicate, then ‘a is more X than b’ is never true? But who will deny that some things are, say, more rational than others? Certainly not Porphyry, who argues long against those who deny reason to animals. But he says that ‘this difference, as Aristotle somewhere says, is . . . something in which there is found the more and the less’ (*abst* III 7).⁵¹

⁵⁰ The Platonist thesis was controversial: ‘there have been several schools of thought about these matters’ (Porphyry, *in Cat* 137.25–138.6).

⁵¹ From this, however, Porphyry appears to infer that rationality cannot be an essential feature of man—and hence that rational is not a difference: above, p. 110.

Another version of the thesis is suggested by 9.18–20: if ‘rational’ is a differential predicate for men, then—although ‘more rational’ may make good sense and although some things may indeed be more rational than others—, nonetheless no man is more or less rational than any other man. In general, differences do not admit the more and the less in this sense: if X is predicated differentially of Y, then ‘This Y is more X than that’ is never true.

The commentators saw an objection to this: some men are more rational than others (see esp [Elias], *in Isag* xl 23–24). They replied by alleging that the word ‘rational’ has two senses (Ammonius, *in Isag* 126.2–6) or that potentially and by nature all men are equally rational ([Elias], *in Isag* xlvi 31). But there are other counterexamples more puissant.

Those genera which differ by degree and by the more and less are subordinated to a single genus . . . for example, bird differs from bird by the more and by degree (one has long feathers, one short). (Aristotle, *PA* 644a16–21)

This programmatic announcement is frequently echoed in Aristotle’s zoological texts—for example:

Among birds, their mutual differences are found in excess and deficiency of their parts and according to the more and the less. For some of them are long-legged, some short-legged; . . . (ibid 692b3–6)

In zoology, differential predicates often do ‘admit the more and the less’. One of the differentiating features of the heron is long-leggedness. This marks herons off from, say, sparrows. But although herons are by definition long-legged, some have longer legs than others.⁵²

This Aristotelian view was not forgotten: Plutarch has one of his speakers reject the thesis that ‘augmentations and diminutions do not make differences or change the genus’ (*quaest conviv* 732BC); and Galen frequently talks of differences which admit the more and the less (e.g. *diff feb* VII 275). Porphyry’s claim that differences do not admit the more and the less is dubious in itself, and it is apparently unAristotelian.

But he offers an argument for it. The argument has two premisses:

(1) *Per se* differences ‘complete the account’⁵³ of the item of which they are differences

⁵² Cf e.g. *Met* 1042a22–35; see Pellegrin, ‘Logical and biological difference’, pp. 331–333; Lennox, ‘Kinds, forms of kinds’.

⁵³ On ‘complete [*συμπληροῦν*]’ see below, pp. 179–180.

—they are ‘in the account of the substance’ of their subject (9.14–15) or part of its definition. Thus premiss (1) shows that the thesis of 9.16–18 is logically dependent on the thesis of 9.14–16.

(2) The being of any item, inasmuch as it is some one and the same thing, does not admit the more and the less.⁵⁴

Premiss (2) is not pellucid; but there is a parallel in Simplicius:

Of those items which accept the same account, some do and some do not admit the more and the less. For in the account of their substance, they do not accept the more and the less—since substance does not accept it. (*in Cat* 285.26–28)

This suggests that in (2) ‘the being of any item’ means ‘the substance of any item’. Thus:

(1*) Differences are parts of substances or of definitions.

(2*) Substances and definitions do not admit of degrees.⁵⁵

Hence (3) differences do not admit of degrees.⁵⁶

The inference seems to be fallacious: after all, one heron is no more or less a heron than another, yet it may have longer or shorter legs, so that its specific difference comes in degrees. And even in antiquity there were voices raised against its second premiss: after all, items which admit the more and the less—virtue, puzzlement, whiteness, . . .—can be defined;⁵⁷ and if they admit the more and the less, then so must their definitions.⁵⁸ The implied argument in favour of the premiss—‘inasmuch as it is some one and the same thing’—has no discernible force.⁵⁹

⁵⁴ This is what the Greek must mean; it would do so more perspicuously were ‘οὐ’ inserted after ‘τὸν αὐτὸν’ in 9.21.

⁵⁵ De Libera, *Isagoge**, p. 57, refers to *Cat* 3b33–4a9, where Aristotle argues that *οὐαία* does not admit the more and less (so also e.g. Alexander, in *Top* 213.14–17; cf 212.1–2; Boethius, in *Cat* 197a); but there Aristotle is talking about items in the category of substance, not of substantial or essential predicates (he goes on to observe that quantity (6a10–25), relation (6b19–27), quality (10b26–11a14), and doing and suffering (11b1–8) all do admit the more and the less). For the notion that definitions do not admit the more and the less see Alexander, *apud* Boethius, in *Int*² 82.27–29.

⁵⁶ This is how e.g. Boethius, in *Isag*² 252.8–22, takes the argument.

⁵⁷ See e.g. *Top* 119a28–31; 127b18–25; 146a3–12; with Alexander, in *Top* 362.10–24; 460.18–21.—*Top* 115b9 (‘An item is not said to be more or less a man’) is contradicted by 137b32–33; but Reinhardt, *Buch E*, pp. 90 and 166–171, argues that the latter passage is not Aristotelian.

⁵⁸ See e.g. Elias, in *Isag* 80.3–29; David, in *Isag* 179.13–180.33; [Elias], in *Isag* xl 18–24; Arethas, in *Isag* 77.10–79.13.

⁵⁹ Is Porphyry thinking of Aristotle, *Met* 1003b32–33 (‘the substance of each thing is one, not accidentally’; cf 1037b26–27)?

There is an answer to all this. To be sure, one heron may have longer legs than another—but not in virtue of being a heron. Herons, *qua* herons, are long-legged; but it is not *qua* heron that the length of their legs differs. Cowards are fearful, and some are more fearful than others; but it is not in virtue of being cowardly that they thus differ. As Boethius puts it, ‘all men, insofar as they are men, are equally rational and mortal’.⁶⁰

This may seem a generous interpretation of Porphyry’s remark. But it is justified by the following passage:

A man, insofar as he is that very thing, i.e. insofar as he is a substance, cannot be deemed to be more a substance than himself or than someone else. (*in Cat* 97.12–13; cf 110.19–24)

It may also seem an obscure interpretation. So here is a limpid version. Suppose that Harry and Harriet are herons, and that Harriet has longer legs than Harry. From the fact that herons have long legs—or from the fact that having long legs is a specific difference of herons—it follows that Harry, being a heron, has long legs, and it follows that Harriet, being a heron, has long legs. But it does not follow that Harriet has longer legs than Harry. To explain that fact you must appeal to something other than the specific difference of herons.

If the interpretation is now both generous and limpid, it may seem, after all, to be unsatisfactory. It is an accident of ravens that they are black, and some ravens are blacker than others. But, just as it was with the legs of Harry and Harriet, so it is with the colour of Jack and Jacqueline: from the fact that they are ravens, you can infer that they are both black—but you cannot infer that Jacqueline is blacker than Jack. So accidents do not admit the more and the less.

Porphyry has been taken to hold that all accidents admit the more and the less.⁶¹ The commentators found this implausible—and Elias, for example, urges that in Porphyry’s view some accidents do and some do not admit of degrees (*in Isag* 80.30–32). Many accounts of what it is to receive the more and the less will be able to accommodate Elias’ sane suggestion. But not the account which has found favour in the last paragraphs.

⁶⁰ *in Isag*¹ 89.3–4—the note is not expanded, or even repeated, in *in Isag*².

⁶¹ See above, p. 173.

***Per se* differences divide genera and constitute species.**

[9.24–10.21]

Porphyry repeats the division of 9.7–11 and adds what at first sight seems to be a subdivision of inseparable *per se* differences: some of them are divisive, others specific (10.1–3). But it emerges that there is no subdivision; rather, every *per se* difference is, taken in one way, divisive and also, taken in another way, specific (10.9–10, 18–19).

The paragraph contains a few oddities.⁶² It also contains two novelties. First, Porphyry takes it for granted that one and the same genus may be divided in several complementary ways—both mortal/immortal and rational/non-rational divide animal. Secondly, differences are consistently presented as pairs of terms (for example, ‘animate and inanimate’, ‘mortal and rational’) rather than as single terms (‘animate’, ‘mortal’).⁶³ The two novelties are connected. Porphyry explains neither—indeed, he mentions neither. But they are not carelessnesses, nor without consequence.

Differences—that is to say, inseparable *per se* differences—are both divisive and constitutive.⁶⁴ They are divisive inasmuch as ‘we divide genera into species according to them’ (10.2—cf 9.2–4). The term ‘divisive [διαιρετικός]’ is not used by Aristotle in this sense;⁶⁵ but it is used elsewhere by Porphyry (e.g. *in Cat* 85.11; cf Dexippus, *in Cat* 27.26); it is found in Alexander (e.g. *in Top* 314.17; 315.1; 319.26; and esp

⁶² At 10.3 the Greek is obscure. I take ‘πασῶν τῶν τοιούτων’ as the subject of the genitive absolute clause and ‘τῶν καθ’ αὐτὰς διαφορῶν’ as predicate, this genitive being partitive. This is hard; but it gives a good sense, and it is no harder than any other construal. (De Libera takes ‘πασῶν τῶν τοιούτων’ as predicate; but he does not translate ‘τοιούτων’, and the sentiment which he ascribes to Porphyry is both false and irrelevant.)—At 10.14–16, Porphyry takes animate/inanimate and percipient/non-percipient to be divisive of substance; but percipient/non-percipient surely divides animate substance, not substance, and at 4.21–23 animate/inanimate divides not substance but body.

⁶³ Consistently—assuming that there is no difference between the singular (‘the difference X and Y’: 10.5, 6–7, 7, 10–11, 11, 15, 16, 17) and the plural (‘the differences X and Y’: 10.12, 13, 13–14); and assuming that at 10.11 the ‘τῆ’ before ‘τοῦ ἀλόγου’ should be deleted.—Elsewhere I find no comparable pairs apart from ‘the difference of being capable of feeling and being incapable of feeling’ (*ad Aneb* i 2c).—At 10.12 I read ‘rational and mortal’ with some MSS, Boethius’ translation and the Armenian version (see Sgarbi, ‘Osservazioni’, p. 421) against ‘mortal and rational’, which is Busse’s choice.

⁶⁴ Hence the appropriateness of the order genus–difference–species (above, pp. 27–28): ‘Differences are intermediates between the two inasmuch as they divide the genus and complete the species’ (Elias, *in Isag* 77.3–5; David, *in Isag* 198.32–33).

⁶⁵ But note ‘divisive definitions’ (i.e. definitions based on divisions) at *APst* 91b39.

448.21–23, where divisive and constitutive differences are contrasted); it was no doubt part of the jargon long before Alexander's day; and in any event, it is hardly a puzzling piece of terminology.⁶⁶

Divisiveness is a relational notion—divisive items divide something or other, and in particular, they divide a genus. So we need to define a relation between a difference—or perhaps rather, a differential pair—and a genus. Say:

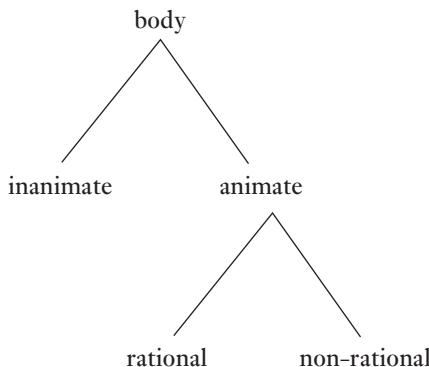
{X₁, X₂} is divisive of Y if and only if either X₁ or X₂ (but not both) is predicated differentially of everything of which Y is predicated generally.

Loosely: a pair of differential predicates divides a genus if and only if precisely one of them is true of every member of the genus.⁶⁷

Why limit the definition to pairs? Dichotomic division is the paradigm;⁶⁸ but in principle there is nothing against trichotomic division—or n-tomic division for any n. It is natural to extend the definition to n-membered classes as follows:

A set of differential predicates divides a genus if and only if exactly one member of the set is true of every member of the genus.

But this has as a consequence that, say, the set {'inanimate', 'rational', 'non-rational'} divides the genus of bodies. And the consequence is unwanted inasmuch as the members of the set are at different levels in the division, thus:



⁶⁶ The term is also used of disjunctive propositions (e.g. Galen, *inst log* iii 1; Alexander, *in APr* 19.6–7); and of the 'method' of division (e.g. Galen, *PHP* V 753; Sextus, *PH* II 213).

⁶⁷ Precisely one of 'white' and 'non-white' is true of every animal; but those predicates do not divide the genus since they are not predicated differentially of its members.

⁶⁸ See above, pp. 132–133.

The members of a differential set ought to be all on the same level. One way to ensure this is to stipulate that no member of a divisive set for a given genus also belongs to a divisive set for a species of the genus.

Why think that there are divisive sets of this sort? Why suppose, for example, that {‘rational’, ‘non-rational’} is one? Perhaps ‘rational’ is predicated differentially of ‘man’. But it does not follow that ‘non-rational’ is predicated differentially of all other animals—or of anything else. Consider the notion of a ‘segregative’ set:

A set of predicates is segregative of a genus if and only if (a) all its members are on the same level and (b) exactly one item of the set is true of every member of the genus.

Not every member of every segregative set of a genus is a specific predicate—on that, everyone is agreed. But the tradition holds, implicitly, that if any member of a segregative set is specific then every member is specific; or equivalently, if any member of a segregative set is specific, then the set is divisive.

This implicit thesis has certain consequences. If men are specifically rational, then my cat Ratty is not accidentally rational; if squirrels are specifically nucivorous, then I do not eat nuts by accident. For if X is predicated differentially of one species of a genus, then—according to the thesis—of every other species some predicate incompatible with X is true; and if a predicate incompatible with X is true of a , then X is not predicated of a —not even accidentally.

However that may be, such is the notion of a divisive set. And it is easy to see why, in speaking of divisive differences, Porphyry should offer pairs (or more numerous sets) as illustrative examples. Arethas indeed says that

rational in itself is not a <divisive> difference nor is non-rational; rather both together—rational and non-rational. (*in Isag* 104.21–22)

And although we might reasonably say that a single predicate is divisive of a genus if and only if it is a member of a divisive set for the genus, nevertheless divisiveness is primarily a feature of sets.

Constitutive differences are also called ‘completive [$\sigmaυμπληρωτικός$]’. Neither term is found in Aristotle. ‘Constitutive [$\sigmaυστατικός$]’ occurs again in Iamblichus’ commentary on the *Categories* (*apud* Simplicius, *in Cat* 59.32–33) and was largely adopted (see e.g. scholia to Dionysius Thrax, *GG* I iii 116.33–38). It is found earlier in Alexander (*in Top*

438.16–17; 448.21–23); and it was probably used by Alexander's teacher, Herminius (Simplicius, *in Cat* 55.17–23).⁶⁹ The word has been taken to carry causal connotations, which are certainly present in the verb 'produce [$\delta\pi\sigma\tau\epsilon\lambda\epsilon\hat{\nu}$]' at 10.17.⁷⁰ Such causal notes have sounded before in the text, and they will sound again.⁷¹

'Compleutive', which occurs elsewhere in Porphyry (e.g. *in Cat* 95.22–33; 99.16; *ad Gedal* 55 = Simplicius, *in Cat* 48.21), was, together with its parent verb, favoured by Plotinus. So scholars suspect metaphysical profundities.⁷² But the word was used of differences before Plotinus got his metaphysical mitts on it—by Alexander, by Galen, by the enigmatic Lucius.⁷³ It is a term used in mereological contexts (for parts are, paradigmatically, compleutive of their wholes⁷⁴), and it thus recalls the thesis that genera and differences are, 'in a sense', parts of their species.⁷⁵

Roughly speaking, a difference is 'constitutive' or 'compleutive' of a species if the species is defined by way of the difference and some genus; a pair of differential predicates constitutes a species if the species is defined by the pair plus a genus; and—for there is no reason to restrict the case to pairs—a set of differential predicates completes a species if the members of the set, together with some genus, define the species. These formulations omit a vital point (which Porphyry himself leaves implicit): each member of any constitutive set must be divisive of the genus together with which the set defines the species. Thus:

{X₁, X₂, . . . X_n} is constitutive of Y (where Y is a special predicate) if and only if there is a general predicate Z such that each X_i is divisive of Z and 'Z which is X₁ and X₂ and . . . X_n' is the definition of Y.

⁶⁹ It occurs in a different sense in Theophrastus, *sens* 84; Sextus, *PH* III 128; *M* VIII 84.

⁷⁰ De Libera translates 'συστατικός' by 'qui fait exister'.—For 'ἀποτελεῖν' (also at 15.16–18), a common and featureless term meaning 'bring about', see e.g. *in Cat* 55.19; 57.8; *in Ptol harm* 18.28; 21.16; 30.31 *et saepe*; Adrastus, *apud in Ptol harm* 8.4; Galen, *diff puls* VIII 724; Sextus, *PH* III 25–26; Alexander, *in Met* 168.7–8.

⁷¹ See above, p. 166; below, p. 191.

⁷² See e.g. *enn* II vi 1.18–22; VI ii 14.15; and esp VI iii 5; and Sleeman and Pollet, *Lexicon*, 960.7–40—so de Libera, *Isagoge**, p. xxxiii, calls it 'a Plotinian expression'. For the fantasized profundities see e.g. Dörrie, *Symmikta Zetemata*, pp. 70–72; more sobriety in e.g. Lloyd, 'Neoplatonic logic', p. 69.

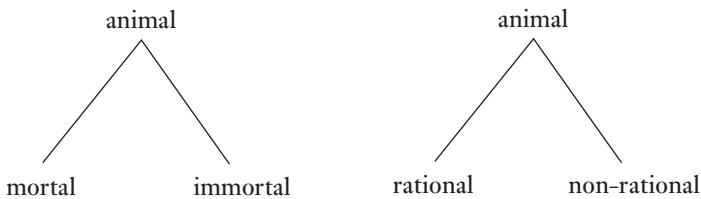
⁷³ For Alexander, see e.g. *in Top* 38.28; 51.1; 444.5–6; 446.2–3; *in Met* 162.22–23; 205.22–24; for Galen, *san tuend*, VI 200; *meth med* X 43; for Lucius, Simplicius, *in Cat* 48.1–11. See also e.g. Dexippus, *in Cat* 48.6–7; Simplicius, *in Cat* 98.1–4.

⁷⁴ See *an fac* 253 = Stobaeus, *eccl I* lxix 25a (esp lines 90–96 in Smith, *Fragmenta**); cf e.g. Galen, *PHP* V 514; Sextus, *PH* III 100; *M* IX 337; Alexander, *mant* 155.24–26.

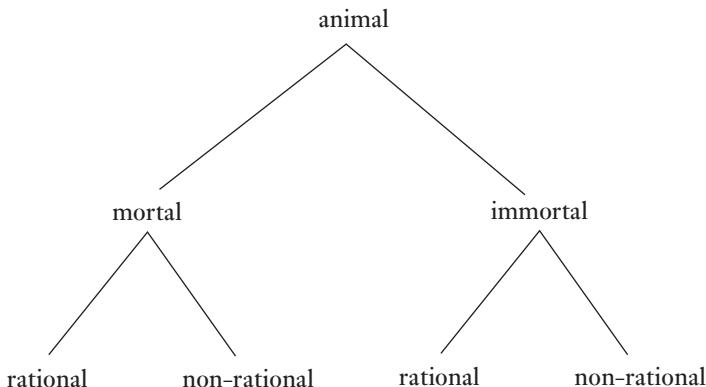
⁷⁵ See above, pp. 148–150.

(Each X_i will of course belong to a different divisive set for Z .) You might say of a single predicate that it is constitutive of a species if and only if it is a member of a constitutive set for the species.

But why introduce constitutive sets? Whereas a genus is divided by two or more differences, are not species typically defined by way of a genus and a single difference? And in any case, cannot constitutive sets always be replaced by constitutive singletons, on the following pattern? The pair of divisions



can be replaced by the following single division:



Animal and mortal (a single constitutive difference) make a species; and that nameless species taken with rational (a single constitutive difference) makes man.

(Perhaps Porphyry treats mortal and rational as a differential pair only because there is no handy name for the species between animal and man. Boethius says that

a genus is sometimes divided into species and sometimes into differences—if the species into which the genus ought to be divided have no name: e.g. when

I say of animals that some are rational and others non-rational, rational and non-rational are differences. (*div* 880B; cf 884C–885A)

This may come from Porphyry.⁷⁶

Yet the amalgamation of the two divisions is infelicitous, for two reasons. First, it requires the repetition of the pair {‘rational’, ‘non-rational’}. Secondly, there is no evident reason to take {‘rational’, ‘non-rational’} as subordinate to mortal (and immortal) rather than putting {‘mortal’, ‘immortal’} below rational (and non-rational).

These might seem trifling objections. Repetition is hardly a crime; and if there is no reason to place mortal either above or below rational, then it does not matter which way we choose. At *div* 878BC Boethius countenances just such a thing: for example, he says, you might divide liquids into black and white, and solids into black and white; or equally, you might divide black items into liquid and solid, and white items into liquid and solid. But Boethius insists that such variety is possible only when you are dividing something according to its accidents: in genus–species division, or division proper, the terms must follow in the correct order; and if rational is neither prior nor posterior to mortal, then it may appear neither above nor below mortal in a division.⁷⁷

Alexander offers a further consideration: rational and non-rational cannot divide mortal animal, since they extend more widely than mortal animal; and for the same reason mortal and immortal cannot divide rational:

The appropriate divisive differences of something do not extend further than that which they divide—e.g. none of the differences which divide animal falls outside animal or holds of anything which is not an animal. (*mant* 169.11–13)

And Galen has the same idea in mind when he notes that

not all differences, when added to a genus, contribute to the generation of a species, but only those which come from an appropriate division of the genus. (Galen, *meth med* X 23–24)

For example, ‘hard’ and ‘soft’ will not divide ‘animal’ since they are differences of ‘substance’.⁷⁸

⁷⁶ For division of a species into differences see Galen, *const art* I 273; *diff puls* VIII 602—but in these texts, Galen uses ‘διαφορά’ to mean ‘type’ (above, pp. 156–157). And elsewhere he reproves Thessalus who, when asked how many diseases there are, names differences and not species (*meth med* X 23).

⁷⁷ For order in divisions see above, p. 131.

⁷⁸ See below, p. 246.

Galen and Alexander treat rational/non-rational not as a subdivision or *ὑποδιαιρέσις* of mortal (and of immortal) but rather as a complementary division or *ἐπιδιαιρέσις* on the same level as mortal/immortal.⁷⁹ In consequence, definitions will be made from what the commentators called ‘syzygies’ or conjugations:⁸⁰ the two differential pairs produced by animal yield four conjugations, namely

mortal, rational
 mortal, non-rational
 immortal, rational
 immortal, non-rational

A conjugation is, potentially, a constitutive set: animal combines—or may, in principle, combine—with each of the four conjugations to make a species.⁸¹

Complementary division is presupposed by Porphyry in the present paragraph. Boethius takes it as evident that ‘there are several divisions of a single genus’ (*div* 885BC). Elsewhere:

It is evident that one thing may be divided in several ways; e.g. if you divide animal by saying ‘Some animals are rational, others non-rational’; and again, ‘Some animals walk, others do not’; and of the same animals some are carnivorous, others herbivorous, others seminivorous. Here one and the same thing is divided in different orders and ways. (*in Cat* 202D–203A)⁸²

This passage derives from Porphyry:

There is no reason why there should not be several divisions of the same item according to different points of view. . . . Animal is split into mortal and immortal; and again, from the beginning, into rational and non-rational; and again, as

⁷⁹ The term ‘*ἐπιδιαιρέσις*’ is late: it has a medical and an astrological use, but I have not noticed it in a logical text earlier than Simplicius: ‘This is called complementary division, being a second division of the same genus according to different differences’ (*in Cat* 136.6–7). Simplicius’ example is the division of animal into mortal and immortal, followed by the complementary division into rational and non-rational. See also *ibid* 424.26–32 (complementary division contrasted with subdivision); Ammonius, *in Isag* 9.26–10.8; Olympiodorus, *in Cat* 84.34–85.7; Elias, *in Isag* 25.26–26.5.—In the late grammarians, an *ἐπιδιαιρέσις* is a subdivision, and a *ὑποδιαιρέσις* is a subsubdivision: scholia to Dionysius Thrax, *GG* I iii 325.14–33; 330.16–34; cf 198.24–26; 483.30–484.5.

⁸⁰ See e.g. Ammonius, *in Isag* 99.10–29; [Elias], *in Isag* xli 28–33.—For this use of the word ‘*συζυγία*’ see in *Ptol harm* 45.5–8.

⁸¹ There was allegedly a dispute between Plato, who admitted all four conjugations, and Aristotle, who denied that anything satisfied the fourth: David, *in Isag* 186.9–16; [Elias], *in Isag* xli 28–33.

⁸² See also e.g. Martianus Capella, IV 346; V 478; Ammonius, *in Cat* 32.2–5; scholia to Dionysius Thrax, *GG* I iii 119.18–24.

a whole, into aerial and terrestrial and aquatic. In the same way, quantity as a whole is split into the continuous and the discrete, and again from another point of view into quantities where the parts have a position relative to one another and those where they do not. (*in Cat* 101.4–12)

The idea was familiar to Alexander (e.g. *in Top* 307.9–310.19); and it is Aristotelian—or at least, it is close to certain views which Aristotle expresses, in opposition to Platonic theory, in the *Parts of Animals*.

We should try to take animals by genera—common sense has guided us by dividing the genus of birds and of fish. Each genus is divided by several differences, not according to a dichotomy. (*PA* 643b10–13)

And more clearly:

If a man were simply a thing with toes, then this would be the one difference. But since in fact he is not, there must be several differences under different divisions. (*ibid* 644a6–10)

A simple theory associated with Porphyrean trees proposes that each genus or species appears in a single division, its position in which is necessary and sufficient to define it. The same theory also proposes that the splits in any division will be (at least usually) dichotomous. Such a theory is perhaps suggested by some of Plato's remarks in the *Sophist* and the *Statesman*; but Plato never expressly endorses it and Aristotle expressly rejects it. Aristotle's arguments in *PA* A 2–4 are not always clear; and in particular, he appears to take the thesis that division is unique and the thesis that splitting is dichotomous to be two aspects of the same thing. In fact, they are independent of one another: uniqueness of division is rivalled by complementary division, dichotomy by pollachotomy.

If pollachotomy and complementary division are put together, then we might find animal, for example, in several divisions, in each of which it is split in a different way; and we might find that some of these splits divide animal into two, others into three, and so on. The simple theory is the limiting case of this extended theory, the case in which the number of divisions of any genus is one and the highest form of pollachotomy is dichotomy.

According to the extended theory, each division will, trivially, have lowest members, beneath which there are individuals. But the lowest members will not generally be the traditional *infimae species*. Man, for example, will not be the lowest member of any division—rather, he will be (as it were) the coalition of several lowest members. (Similarly, certain

intermediates—the class of felines, for example—will not be found in any division.) The consequences of this ramify, and they imply an account of definition far different from the one attached to the simple theory.

At 10.18–19 Porphyry claims that the same differences taken in one way are constitutive, taken in another divisive; hence both may be called specific. The inference is curious, and the claim perplexing. (At *in Cat* 85.11–13 ‘divisive’ and ‘specific’ are opposed.) Porphyry seems to say that any differential pair which divides a genus also constitutes a species, and *vice versa*. But, on the contrary, no differential pair which divides a genus also constitutes a species. Porphyry’s examples suggest that he is thinking of pairs of differential pairs. Thus the pair of divisive pairs,

{rational, non-rational}, {mortal, immortal},

is the same as the pair of constitutive pairs,

{rational, mortal}, {non-rational, immortal}.

But this is not quite right; and in any case, why should it encourage us to call constitutive pairs ‘specific’?

Rather, Porphyry means that any predicate which is a member of a divisive differential set is also a member of a constitutive differential set, and *vice versa*. So the ancient commentators—who then object that a highest genus has no constitutive differences and a lowest species no divisive differences; hence constitutive and divisive differences are not the same.⁸³ The premiss is true, the inference fallacious. Every difference which divides a genus constitutes a species, and every difference which constitutes a species divides a genus. The divisive differences of a highest species are, trivially, constitutive differences—of the species below it.

A different objection derives from Boethius’ commentary on the *Categories*—and hence perhaps from Porphyry himself:

There are some differences which complete nothing themselves and which make no species but merely divide the genus—e.g. rational and non-rational. (*in Cat* 179B)

Rational animals do not form a species of animal; hence rational is not a compleptive difference. Perhaps Boethius means only that the genus

⁸³ e.g. Ammonius, *in Isag* 100.1–10; Elias, *in Isag* 81.5–23; David, *in Isag* 181.15–20; [Elias], *in Isag* xli 10–15.

here is divided into differences rather than into species—since there is no species-name.⁸⁴ But he seems to be making a stronger point. Suppose that animal is divided both by rational/non-rational and also by mortal/immortal. Then any species of animal must be defined by one of the four conjugations, and ‘mortal animal’, say, will not define any animal species.

What, then, is the status of the predicate in

All men are mortal?

It is not general or special, and it is not a property; nor an accident. But it now turns out that it is not a difference either: the difference of man is not mortal but mortal and rational. So the pentad is not exhaustive. On the other hand, ‘mortal and rational’ is a complex predicate; hence it is not within the scope of the pentad⁸⁵—and not a differential predicate.

These rumblings do not raise serious difficulties; but they do raise questions which a Porphyrean ought to address.

The old masters present *per se* differences in four ways.
[10.22–12.10]

10.19–21 takes up 9.2–6, indicating that *per se* differences are the only variety to interest a logician. To say that they are ‘especially [μάλιστα] useful’ is strange. Porphyry cannot mean that other sorts of differences are somewhat or sometimes useful for divisions and definitions—although Ammonius suggests that ‘human weakness’ may oblige us to use non-specific differences where logical rigour demands the specific (*in Isag* 100.23–101.4). Does Porphyry mean that *per se* differences are especially useful for divisions and definitions but also useful for other things too? It is better to imagine a dash after ‘useful’: ‘These are especially useful—they are useful for divisions and definitions whereas other differences are no use at all’.

However that may be, Porphyry now reports four accounts of *per se* differences. For the first two, Porphyry uses the verb ‘define [όριζειν]’ (10.22; 11.7); for the third ‘delineate [ὑπογράφειν]’ (11.18); and for the fourth ‘present [ἀποδίδοναι]’ (11.21). If the verbs are to be taken seriously, then there are two definitions (in the strict sense of the term), one

⁸⁴ See above, pp. 181–182.

⁸⁵ See above, pp. 72–73.

delineation (which falls short of a genuine definition), and one formula of an unspecified nature.⁸⁶ The reasons of reciprocity which allegedly prevent definition for genus and species do not apply to differences. They might have done so: according to David,

some wonder why Porphyry defined difference in terms of genera and species but explained genera and species reciprocally, although species can be defined in terms of genus and difference (as when you say: A species is what has more differences than a genus), just as genera can be presented in terms of species and differences (as when you say: A genus is what is observed in a species but not in a difference). (*in Isag* 187.30–188.5)

But why indulge in reciprocal accounts if you do not need to?

Perhaps the verbs are not to be taken seriously. Perhaps there are four definitions? As Aristotelians know, there is only one definition for any definable item;⁸⁷ so perhaps the four are rivals? Or are they one definition in a fourfold disguise? The matter is hardly palpitating; but it will be necessary to ask how the four accounts relate to one another.

A difference is (a) that by which a species exceeds the genus. [10.22–11.6]

The verb ‘exceed [$\pi\epsilon\rho\iota\sigma\sigma\epsilon\nu\epsilon\nu$]’ in its most familiar sense means ‘be superfluous’ (e.g. *in Cat* 60.1; *in Ptol harm* 173.12; and ‘ $\pi\epsilon\rho\iota\tau\tau\acute{o}s$ ’ at 3.20). But it also has a neutral use.⁸⁸ It is picked up by ‘surpass [$\pi\lambda\acute{e}ov\acute{e}\chi\epsilon\nu$]’ (11.1; cf 15.16), which again is to be taken neutrally.⁸⁹ What Porphyry means is made clearer by his example. A pedantic version might go like this:

A set of predicates $\{X_1, X_2, \dots, X_n\}$ is predicated differentially of Y if and only if there is a Z and a W such that Z is predicated specially of Y and W is predicated generally of Y and Z is defined by ‘W which is X_1 and X_2 and \dots and X_n ’.

⁸⁶ See above, pp. 57–59.—The ancient commentators generally speak of delineations: Ammonius, *in Isag* 101.8–9; 106.9; Elias, *in Isag* 82.4–8; [Elias], *in Isag* xlii 1–2; xlivi 1. David insists that the accounts are definitions: *in Isag* 192.14–25 (see above, p. 62).

⁸⁷ See e.g. *Top* 141a31–b1; 142b35; 151b17.

⁸⁸ For neutral occurrences, none of them quite parallel to our text, see anon, *in Th* XXXIII 31–35; Galen, *us part* III 864; Nicomachus, *introd arith* II xxi 6; Alexander, *in Top* 128.11–14.

⁸⁹ Cf ‘ $\pi\lambda\acute{e}ov\acute{e}\zeta\epsilon\nu$ ’ at 15.22–23 (and e.g. Aristotle, *Met* 994b16–18); ‘ $\pi\lambda\acute{e}ov\acute{e}\kappa\tau\acute{e}\iota\nu$ ’ at *in Cat* 124.29; Alexander, *in APr* 49.4; 51.17 (with Plato, *Parm* 149B).

This is the formula proposed earlier as a definition of specific predication—except that single predicates have been replaced by sets.⁹⁰

For example, a man is an animal which is rational and mortal: man has rational and mortal—animal does not (11.1). What could be plainer? But Porphyry adds an explanatory comment which muddies the water: ‘animal is neither none of these items . . . nor yet does it possess all the opposite differences’ (11.2–3). The phrasing is rough; but it emerges that, according to Porphyry, a genus must possess all its divisive differences and also cannot possess all its divisive differences. For example: (1) animal must possess both rationality and non-rationality, both mortality and immortality (for whence otherwise will the different species get their differences?); and yet (2) animal cannot possess both rationality and non-rationality, both mortality and immortality (for they are opposite attributes).

This is impossible; for (1) and (2) are contradictory. Porphyry saves the day by the adding of qualifications:⁹¹ thus (1*) animal possesses, potentially, both rationality and non-rationality; and (2*) animal does not possess, actually, both rationality and non-rationality. Unlike (1) and (2), (1*) and (2*) are not contradictory—and (or so Porphyry implies) they can satisfy the needs which suggested the impossible (1) and (2).

In the course of his remarks on genera and species, Sextus considers an argument which is cousin to Porphyry’s (*PH* II 223–227). Put in terms of Porphyry’s example, the argument runs thus:

Either (1) animal possesses both rationality and non-rationality or else (2a) animal possesses neither rationality nor non-rationality or else (2b) animal possesses one but not both of rationality and non-rationality.

But (1) is impossible, since rationality and non-rationality are opposites. And (2a) is impossible—for then there would be no animals.

And (2b) is impossible, since if animal possesses rationality then there are no non-rational animals and if animal possesses non-rationality then there are no rational animals.

Sextus’ argument in effect divides Porphyry’s (2) into two sub-cases. The point is noted by, e.g. [Elias], *in Isag* xlii 26. Other commentators imagine (only to dismiss) yet other possibilities.⁹²

⁹⁰ See above, p. 162.

⁹¹ The point is usually taken to be repeated at 14.20–21 (but see pp. 247–248); cf [Galen], *ad Gaur* i 2.

⁹² Boethius, *in Isag*² 263.22–25, notes and scouts the idea that a genus might be partly one of its divisive differences and partly the other; David, *in Isag* 189.19–20, mentions (as absurd) the possibility that a genus might oscillate between one difference and another (cf Boethius, *in Isag*² 92.20–93.1).

The argument was hardly invented by Sextus. It may have been suggested by the following passage from the *Metaphysics*:

A genus seems not to participate in its differences; for then the same thing would participate in contraries—for the differences by which a genus differs are contrary. But even if it does participate . . . (*Met* 1037b18–21)⁹³

Sextus considers a reply to his argument: why not say that animal possesses both rationality and non-rationality potentially? The reply is Porphyry's resolution of the contradiction.⁹⁴ Sextus rejects it: if animal potentially possesses rationality and non-rationality, then—Sextus infers—it is possible that animal possesses rationality and non-rationality. But it is not possible. Sextus errs. On the Porphyrean view, animal is potentially rational and animal is also potentially non-rational. It follows that it is possible that animal is rational, and possible that animal is non-rational. It does not follow that it is possible that animal is both rational and non-rational. (In general, from 'It is possible that P and it is possible that Q' it does not follow that it is possible that both P and Q.)

Nonetheless, the Porphyrean appeal to potentiality is both mistaken and unnecessary. It is mistaken. For to say that animal is potentially rational is to say that, in general, animals are potentially rational. But they are not. Boa constrictors are animals, and they are not potentially rational. The appeal is unnecessary because Sextus' argument is a sophism. Each of (1), (2a) and (2b) is false—and Sextus shows as much. But the three propositions do not exhaust the cases. There is another possibility, namely:

(3) Some animals are rational and some are non-rational.

The sophism turns, as David saw, on construing 'Animal is rational' as a singular proposition:

⁹³ Cf [Aristotle], *Met* 1059b31–33. You might also think of Plato, *Soph* 250BD: Motion and Rest are both contained by Being, and yet Being is neither Motion nor Rest.

⁹⁴ The commentators call it the Peripatetic resolution (note Porphyry's 'as they claim': 11.4)—they were thinking of texts such as *Met* 1009a34–36 ('Potentially it is possible for the same thing to have contraries at the same time, actually it is impossible'). They also report that 'the Platonists' hold that genera possess actually all their divisive differences: e.g. Elias, *in Isag* 84.22–86.22; David, *in Isag* 190.17–192.8; [Elias], *in Isag* xlvi 30–37—and Ammonius, *in Isag* 102.3–105.12, with the irenic suggestion that Platonism holds of universals 'before the many' and Aristotelianism for universals 'on the many' (see above, p. 44).

So if animal is one item in number, and partless as to genus, and if genera are universals and universals are incorporeal and incorporeals are partless, how can it receive opposites at the same time? (*in Isag* 189.14–17)

Not being one in number, animal can receive opposites: that is to say, some animals are rational and others are non-rational. Animals in general are neither rational nor non-rational. The question: Are animals rational or non-rational? is on all fours with the question: Are chessmen black or white? And the answer to the former question which Porphyry reports is on all fours with the contention that chessmen are both potentially black and potentially white.

In his discussion of the Stoic theory of impressions, Sextus remarks that

general impressions are neither true nor false; for where the species are either such-and-such or so-and-so, there the genera are neither such-and-such nor so-and-so. For example, of men some are Greek and some foreign; but man in general is neither Greek (since then all special men would be Greek) nor foreign (for the same reason). (*M VII* 246)

The point is evident. Could Porphyry have missed it? A generous eye will find it in Boethius:

Animal, insofar as it is said of species, is neither rational nor non-rational; and man, insofar as it is said of individuals, is neither well nor ill. (*in Cat* 202A)

This text probably derives from Porphyry—and Porphyry certainly saw the point. In discussing the Aristotelian thesis that substances can receive contraries, he explains that,

being universal, it is not they but the items under them which accept them: just as colour is neither white nor black but white and black are under it, so man *qua* common and animal *qua* common and holding of several items—man in this way is neither wise nor foolish, neither ill nor healthy, . . . (*in Cat* 99.22–26)

But if Porphyry saw the point, why did he insist that animal was nevertheless (potentially) both rational and non-rational? He says that species must get their differences from somewhere—and surely from their genera; and if man gets rationality from animal, then animal must, in some manner, possess rationality. Boethius argues, after Porphyry, that ‘a genus contains <the differences> by its own force and potentiality but is itself neither of them’; and he explains that the genus contains them potentially inasmuch as ‘it can produce both of them from

itself' (*in Isag*¹ 26.15–27.18). In other words, animal is potentially rational not in the sense that animals could or might be or become rational: animal is potentially rational in the sense that it has the capacity to produce rational items. (Cognac is potentially hot not insofar as you can warm it up but insofar as it can warm you up.) Perhaps this is what Porphyry meant: he does not hold the absurd view that animals are actually rational, nor even the mildly less absurd view that animals are potentially rational (in a normal sense of 'potentially')—he holds that the genus animal makes, or helps to make, a rational species. Whether or not this is blarney depends on what is to be made of its invocation of causal expressions.⁹⁵

A difference is (b) what is predicated of several items, different in species, in answer to 'What sort of so-and-so is it?'. [11.7–17]

The second account of difference was implicitly adduced at 3.5–19, where, as here, Porphyry supported it by referring to appropriate replies to the question: 'What sort of so-and-so is it?'.⁹⁶ The account is not found explicitly in Aristotle; but it is Peripatetic, and it is common in later texts.⁹⁷ At *Top* 101b18–19 Aristotle remarks that differences are general, so that topics for genera apply equally to differences. Alexander explains that this is so because, first, differences, like genera, are substantial; and secondly,

differences too extend further and are predicated of several items different in species; for a difference differs from a genus only in not being predicated in answer to 'What is it?'. (*in Top* 38.29–31)⁹⁸

But there is a puzzle here—which Porphyry's illustrative example brings out. He cites rational and mortal as the specific difference of man; but this difference does not hold of items differing in species.

⁹⁵ See above, p. 166; below, pp. 257–258.

⁹⁶ See above, pp. 85–92.

⁹⁷ See e.g. *in Cat* 95.6–8; Alexander, *in Top* 47.14–18; 365.25–366.13; Simplicius, *in Cat* 55.1–2; scholia to Dionysius Thrax, *CG* I iii 118.32–119.2; anon, *in Hermog stat* 277.2–9. At 11.11 we should perhaps read '<δτι> λογικόν' (with some MSS and Boethius). Similar cases at 3.11, 12, 14; 17.12.

⁹⁸ See also Boethius, *top diff* 1178B.—On the puzzle see e.g. Stump, *Boethius*, pp. 252–258.

Elsewhere Alexander says that

a difference is either equal to the species of which it is predicated, when the difference which is properly and proximately specific is taken (as footed, being a specific difference of footed animal, is equal to it), or else it is wider, as biped or rational is wider than man. (*in Top* 317.10–14)⁹⁹

If a difference is equal to its species, then it will be predicated only of members of that species and of any of its subspecies; and if the species is a lowest species, it will be predicated only of items in one species. The commentators latched on to this: the second account of differences, they say, is limited to differences of non-lowest species, and the first two accounts are accounts of different notions—just as the delineations of species were delineations of different notions.¹⁰⁰

David did not like this—after all, Porphyry gives no indication that there are two different notions in play. He found a textual solution to the problem:

In many of the MSS, the conjunction ‘καὶ’ is also found: ‘of several things, differing even in species’—so that we understand ‘in number’. (*in Isag* 195.13–16)

The variant text is supposed to mean: ‘. . . of several items which differ <in number, and sometimes> even in species’. But this construal is dubious, and David’s variant is unappealing. (It is not even noted by Busse in his *apparatus criticus*.)

The solution is rather to be found in Porphyry’s commentary on the *Categories*:

Since many species, while being the same in genus, are often separated by differences—as man and ox and dog, while being the same in genus (they are all animals) are separated from one another by differences—, and since a difference sets down what sort of so-and-so each of the species is (it is the differences which set down that man is a rational mortal animal and the dog a non-rational barking animal), then a difference will be what is predicated, in answer to ‘What sort of so-and-so is it?’, of several items which differ from one another. Thus winged is a difference, being predicated of several items—it is said of swan and of raven and of eagle. (*in Cat* 82.14–22)

A difference is here said to be predicated of several items, not of several items differing in species. But the ‘several items’ are several species—as Porphyry says explicitly a line or so further on:

⁹⁹ For ‘equal’ and ‘wider’ see above, pp. 143–144.

¹⁰⁰ So e.g. Elias, *in Isag* 86.27–28 (‘there are two species of difference, either more universal than the species or equalling the species’); cf 87.9–14; [Elias], *in Isag* xlivi 36; Boethius, *in Cat* 177c.

But since you presented differences as being said of several species, tell me, are things really as you say? (ibid 82.29-30)

And the answer to this question is not 'Yes', but:

No—but they are so for the most part. Some differences are equinumerous with their species—like lightness and heaviness, the former holding only of fire and the latter of earth. (ibid 82.31-32)

Differences are usually predicated of items in different species—but not always. And the *Introduction* repeats the claim that differences are said of items differing in species at 13.23-14.3, 18.19-21, and 19.11-13—adding the adverb 'often' in the last two passages.

Special predicates were delineated so as to hold of several items; and Porphyry then announced that this is only true 'for the most part'. Others took a different line: special predicates are 'such as' to hold of several items, even if in fact they hold of one item alone.¹⁰¹ Differential predicates, according to the second account, hold of items different in species; and Porphyry announces that this too is true only 'for the most part'. Others took a different line:

Porphyry says that differences are said of several species for the most part; but according to Iamblichus, 'even if certain differences are not said of several species, nonetheless they too are such that, as far as it lies within them, they might be said of several'. (Simplicius, *in Cat* 56.6-10; cf Boethius, *in Isag*² 257.8-17)

You may prefer Iamblichus to Porphyry—'for the most part' sounds out of place in logic. In any event, it is a pity that Porphyry did not say something like this: 'Differential predicates say what sort of so-and-so something is—generally (but not always) they are predicated differentially of items in different species'. And it is a pity that his illustrative example is an exception to the 'for the most part' rule.¹⁰²

According to the second account, differences are answers to 'What sort of so-and-so is it?'. Aristotle sometimes says that differences are predicated in answer to 'What is it?', and so too does Alexander.¹⁰³ And

¹⁰¹ See above, pp. 102-103.

¹⁰² Perhaps rational and mortal is predicated non-differentially of non-human items—for example, of the cat Ratty. (See above, p. 162.) But it can hardly be a necessary condition on X's being a differential predicate of Y that X also hold non-differentially of some non-Y; and in any event, Porphyry plainly means that a differential predicate is predicated differentially of items in several species.

¹⁰³ See above, p. 88.

although Aristotle also formally denies that differences are so predicated, urging, for example, that

no difference signifies what something is, but rather [$\mu\hat{\alpha}\lambda\lambda\sigma\tau$] what sort of thing—like terrestrial and two-footed, (*Top* 122b16–17)

nonetheless, he is aware that ‘some people think that differences too are predicated of species in answer to “What is it?”’ (*ibid* 128a20–21). This raises doubts about the utility of the question ‘What is it?’, but not about ‘What sort of so-and-so is it?’. For if a differential predicate may sometimes answer ‘What is it?’ it may also, and always, answer ‘What sort of so-and-so?’.

Nevertheless, the question will surely collect too many answers. Thus ‘A black one’ seems a reasonable answer to the question ‘What sort of bird is a raven?’; ‘A laughing one’, to the question ‘What sort of animal is a man?’ But the former answer gives an accident and the latter a property. The question-test is as frail in the case of differences as it is in the case of genera and species.¹⁰⁴

The second account of differences, like the first, is accompanied by an obscure comment. The comment introduces the Aristotelian couple of matter and form. In general, Porphyry says, every object ($\pi\rho\hat{\alpha}\gamma\mu\alpha$) is composed of matter and form—or else of something analogous to matter and something analogous to form.¹⁰⁵ A statue—one of Aristotle’s stock examples¹⁰⁶—consists of bronze (as matter) and a certain shape (as form); and so on for all ordinary physical objects. The common man is also an object; he does not consist of matter and form; but he does consist of a genus (which is analogous to matter) and of a difference (which is analogous to form).¹⁰⁷ Thus the species will be analogous to the composite of matter and form.

¹⁰⁴ See also Additional Note (L).

¹⁰⁵ ‘matter or something analogous’: cf Plotinus, *enn* III vi 15.19; Alexander, *in Met* 415.12.

¹⁰⁶ e.g. *Met* 1029a3–5.—Ammonius, *in Isag* 106.16–19, strangely supposes that matter and form are restricted to natural items, artefacts being analysed into what is analogous to matter and form (cf Arethas, *in Isag* 101.21–28).

¹⁰⁷ The Greek at 11.15 is not easy: you might expect, say, ‘ $\tilde{\nu}\lambda\eta\ \tilde{\alpha}\nu\lambda\lambda\sigma\tau\sigma\tau$ ’. Boethius has ‘*similiter*’ or ‘*proportionaliter*’ (cf 11.13); that is to say, he probably had an adverb in his Greek exemplar. (In his first commentary he notes that Victorinus translated ‘ $\tilde{\alpha}\nu\lambda\lambda\sigma\tau\sigma\tau$ ’ as though it were ‘ $\tilde{\alpha}\lambda\lambda\sigma\tau\sigma\tau$ ’ (*irrationalis*); the right translation, he says, is ‘*proportionalis*’ (*in Isag*¹ 95.14–96.2). In the second commentary he replaces ‘*proportional*’ by ‘*similar*’ without comment.)—For ‘ $\tau\tilde{\delta}\ \tilde{\delta}\lambda\sigma\tau\ \tau\tilde{o}\tilde{v}\tilde{t}\sigma\tau$ ’ at 11.15 see e.g. Porphyry, *in Cat* 65.3; 66.16; 95.19; anon, *in Parm* XI 30; XII 13, 20; Alexander, *in APr* 12.12–13; 20.8–9; 40.29; 265.20; 326.13; 390.12–13; Ammonius, *in Int* 3.29–30; 40.1; 210.33. The phrase, a piece of scholastic jargon, is sometimes misconstrued.

That a genus is, or is analogous to, matter is an Aristotelian doctrine:

In the seventh and eighth books of the *Metaphysics* he discusses <the unity of definition> at length, declaring that the genus . . . has the rôle of matter in definitions and the difference—and in particular the final difference which applies to the definiendum alone—is *εἰδοποιός* and perfects its own matter. (Ammonius, *in Int* 71.5-11)

(The play on ‘*εἰδοποιός*’—at once ‘specific’ and ‘form-making’—is untranslatable.) Ammonius is thinking of *Met* 1045a14-b7: there Aristotle tackles the question of the ‘unity of definition’ (why is a rational animal one thing, not two?), and he answers by appeal to the unity of matter and form.¹⁰⁸ Elsewhere:

So if the genus simply does not exist apart from its own species as genus, or else exists but exists as matter (for voice is genus and matter, and the differences make the forms, i.e. the letters, out of it) . . . (1038a5-8)

And in *Met* 4 Aristotle discovers a sort of genus which is ‘what underlies the differences’ (1024b3-4), and says that in this sense we have

genus as matter—for that of which the difference and the quality holds is the underlying item which we call matter. (1024b8-9)

A further text is worth citing.¹⁰⁹ At *PA* 643a16-27 Aristotle raises some difficulties for dichotomous division. In the course of the argument he invites us to take a genus, then its differences, then the differences of its differences, and so on down to unsplittable items:

The final differences will be four (or some other plurality obtained by doubling from one upwards), and there will be the same number of species [*εἴδη*]. And a difference is a species [*εἶδος*] in matter—for no part of an animal is without matter, nor yet is matter alone. (643a22-25)

Does Aristotle mean that a difference is an enmattered form? or an enmattered species? And is there any difference between the two options?

However that may be, the Aristotelian position was for a time a matter of controversy—thus item ii 28 of the Alexandrian *Questions* is devoted to showing the differences between genus and matter. But

¹⁰⁸ At 1045a34 he makes a distinction between ‘perceivable matter’ and ‘intelligible matter’: some commentators think that a genus is intelligible matter for its species.

¹⁰⁹ Cf *Met* 1016a26-28; 1023a35-b2; 1033a1-5; 1058a23-24; *GC* 324b6-7. See e.g. Happ, *Hyle*, pp. 639-649; Rorty, ‘Genus as matter’; White, ‘Genus as matter?’; Lloyd, *Form and Universal*, pp. 32-35.

elsewhere Alexander can write, without apology, that ‘a difference is not a composite but a form without matter’ (*diff spec 7*); and the view became a commonplace.¹¹⁰ Boethius reports it blandly enough:

The genus is matter for the species; for just as bronze, when it has received a form, turns into a statue, so a genus, when it has received a difference, turns into a species. (*div 879C*)¹¹¹

Porphyry offers a modest version of the commonplace, claiming not that genus and difference are matter and form but that they are analogous to matter and form. Moreover, genus and difference are quasi-matter and quasi-form for man in general rather than for each individual man.

Why think that a genus is analogous to matter? If the matter of individual men is flesh and bones, why not take the quasi-matter of man in general to be flesh and bones in general? Again, what does the analogy consist in? Well, matter is determined by form, and genus is determined by difference.¹¹² Or again, matter and form make a unity, and genus and difference make a unity. Or again, an individual is a piece of matter which is thus formed, and a species is a genus which is thus differentiated. Such things are easily said, and they are perfectly unilluminating.

We are all agreed that unquantified propositions stand as matter to quantified propositions inasmuch as they take the quantifiers, which are analogous to forms, and produce the quantified propositions as a sort of composite. (Ammonius, *in Int 111.19–22*)

‘We are all agreed’ that one thing is not unlike another.

Finally, why mention the analogy here? Porphyry apparently offers it as a reason for accepting the second account of difference (‘for [$\gamma\acute{a}p$]’: 11.12). The commentators think that he supplies two reasons for taking differences to be predicated in answer to ‘What sort?’: first, there is the ‘dialectical’ argument which appeals to apposite answers to questions of that form; secondly, there is the ‘physical’ argument which refers to matter and form. The argument is this: Difference is analogous to form; form is a quality: hence difference is a quality.¹¹³ This is a terrible argu-

¹¹⁰ See e.g. Plotinus, *enn* II iv 4.2–5; Trophonius, *proleg* 11.17–12.1.

¹¹¹ But a little later there is a note of caution: ‘A genus is a sort of matter [*materia quaedam*], a difference a form’ (*ibid* 88ob).

¹¹² So e.g. Elias, *in Isag* 88.1–4.

¹¹³ See Ammonius, *in Isag* 106.12–13; Elias, *in Isag* 87.28–88.6; David, *in Isag* 195.17–29 (with a reference to *Cat* 10a11 for the premiss that form is a quality); [Elias], *in Isag* xliii 17–28. The interpretation is followed by e.g. Tricot, *Isagoge**, p. 31 n. 3; de Libera, *Isagoge**, p. 58 n. 85 (but at p. 58 n. 82 he denies that ‘ $\pi\o\hat{\iota}\o\pi\tau$ ’ refers to quality).

ment, and there is no hint of it in Porphyry's text. But how else explain the 'for'?

A difference is (c) what separates items under the same genus. [11.18-20]

So too at *in Cat* 82.14-17, and earlier in Alexander (*in Top* 366.2). The ultimate source is the *Topics*:

The genus must separate the object from other items, the difference from one of the items in the same genus. (140a27-29)¹¹⁴

Porphyry says that the difference 'is of a nature such as to separate [τὸ χωρίζειν πεφυκός]'. Perhaps the appeal to nature is meant to exclude artificial differences?

A difference is what separates substances and qualities from one another . . . Such items are also called natural qualities because they are inseparable and hold by nature of everything. (scholiast to Dionysius Thrax, *GG* I iii 117.10-13)

Or perhaps 'of a nature such as to separate' is a periphrasis for 'separate'?¹¹⁵

Alexander, in his usual rebarbative style, remarks that

Aristotle says that we should look for the differences . . . in items close to one another, where it is possible to take them, erroneously, for the same, i.e. items under the same genus (for the differences of items close in this way to one another are not evident—this is what he means by 'in the same genera', i.e. in items under the same genus—and the differences of such items will be differences in the strict sense) and also in items in genera which are different but not far distant from one another. (*in Top* 115.19-26)

He is commenting on *Top* 107b39-108a6; but he has in mind a note in the *Metaphysics*:

It has been shown that there are no differences with respect to items outside the genus. (1055a26-27)

¹¹⁴ See also e.g. Quintilian, V x 61; Gellius, IV i 12; Alexander, *in APr* 16.23-31; *in Top* 421.18-22; Plotinus, *enm* IV iv 4.2-5; Dexippus, *in Cat* 29.2-3; 47.32-33; Simplicius, *in Cat* 97.26-27; Boethius, *in Cat* 177b; Trophonius, *proleg* 12.13-15.—For 'separate [χωρίζειν]' see 2.9; 3.17; 'discriminate [διιστάνειν]' is a synonym, so too 'set apart [διαστέλλειν]' at 3.15-16 (cf *in Cat* 65.3-7; 89.2-3).

¹¹⁵ On the need to specify that a predicate holds 'by nature' see Aristotle, *Top* 134a5; Alexander, *in Top* 399.27-400.9. But these texts refer to properties, not to differences (see below, p. 209).

That is to say, a differential predicate of X, in the strict sense of ‘differential’, marks off X from other items in its genus.

You might object that, although ‘rational’ is a differential predicate of man, it does not mark off men from gods, who are in the same genus. But Aristotle says that a difference marks off an item ‘from one of the items [*τινός*]’ in the same genus—not from all of them. And this is implicit in Porphyry’s example: ‘rational’ marks off man from horses but not from gods. You might, secondly, object that ‘rational’, a differential predicate of man, marks off men from stones, which are in a different genus; and in general it is plain that a differential predicate will mark off items in a species from numerous items which are not in the same genus.

More seriously, you might object that the account will fit predicates which are not differences at all. For example, ‘oval-eyed’ of goats, ‘long-necked’ of giraffes, ‘black’ of Ethiopians. This objection is fatal—and 12.1–10 explicitly recognizes the point and modifies the account.¹¹⁶

Differences are (d) what things differ by. [11.21–12.1]

So too at *in Cat* 95.6–7: ‘a difference is that by which one species differs from another’.¹¹⁷ This text makes it likely that at 11.21 the Greek plural ‘ἕκαστα’ should be taken to mean ‘each sort of thing’, not ‘each thing’. In any event, the fourth account is patently inadequate: it will apply to any difference whatever.¹¹⁸ The remarks which immediately follow recognize the inadequacy. But why did Porphyry set down the

¹¹⁶ David says that Porphyry ‘adds “substantially”’ to the third formula (*in Isag* 196.18–19): did his text of *Isag* read ‘οὐσιωδῶς’ at 11.19 (cf. 196.10–11)? No: 197.22–198.15 (cf. 199.8–9) shows that he takes Porphyry to make the addition later, at 12.1–10.

¹¹⁷ See also Martianus Capella, IV 346; Boethius, *dv* 880a.—At 11.21 Boethius has ‘*a* *se*’ (= ἀλλήλων: cf 2.27; 21.6). Perhaps rightly? But at 11.21–22 he read a mutilated text. (His first commentary, *in Isag*¹ 96.17–22, presupposes a very different Greek.)—At 11.22–23 Tricot, *Isagoge*^{*}, p. 31 n. 5, suggests ‘ζῷα γάρ’ (so the Aldine edition) for ‘θητὰ γάρ ζῷα’, and ‘τὰ ἄλογα’ for ‘οἱ ἵπποι’. (The latter corruption is to be explained by the fact that in later Greek ‘ἄλογον’ means ‘horse’. But this usage is not attested before the sixth century; and Boethius had ‘ἄλογα’ in his text.)—At 11.24 some MSS offer ‘angels’ where Busse prints ‘gods’. Similarly at 10.13. At 14.2, 18.23 and 19.12 all Greek MSS have angels and the ancient translations gods. Porphyry could have written ‘angels’ (e.g. *ad Aneb* ii 3b.) But no doubt he wrote ‘gods’, and a scandalized Christian copyist demoted them to angels. (At least, that is the usual story.)

¹¹⁸ So e.g. Boethius, *in Isag*² 270.11–271.23; David, *in Isag* 197.12; [Elias], *in Isag* xlivi 11; Arethas, *in Isag* 81.10–12.

account in its inadequate form? Presumably he found it offered by an Old Master; and no doubt he is thinking of Plato's reference to 'the difference of each item by which it differs from the other items' (*Tht* 208D).

But accounts (c) and (d) must be modified. [12.1-11]

When they elaborate¹¹⁹ these accounts, the Old Masters¹²⁰ insist that not any chance predicate which separates items under the same genus is to count as a difference: rather, the predicate must 'contribute to the being' of the items, or be 'part of what it is to be' them.¹²¹ So:

X is predicated differentially of Y if and only if X is essential to Y and there is a Z which X divides and which is predicated generally of Y.

Thus reformed, the third account of difference is equivalent to the first. So too for the fourth.

A few trifles.—The example, being naturally given to sea-faring, is found again in Boethius (*div* 881B) and in Simplicius (*in Cat* 55.9-12), who no doubt took it from Porphyry. It is not, so far as I have noticed, in Aristotle, nor in Alexander; but it was no doubt a Peripatetic illustration.¹²²—There are three new items of terminology.¹²³ 'Contribute' is self-explanatory—and Porphyry has his mind on *Top* 133a1.¹²⁴ 'What it is to be so-and-so [$\tau\delta\ \tau\iota\ \hat{\eta}\nu\ \epsilon\hat{\nu}\alpha\iota$]' is a dark and celebrated Aristotelianism which Porphyry here introduces, without explanation, into an elementary exposition. 'Readiness [$\hat{\epsilon}\pi\iota\tau\eta\delta\epsilon\iota\sigma\tau\eta\varsigma$]' is generally used of passive capacities (a piece of wood has a 'readiness' for

¹¹⁹ For 'προσεξέργαζόμενοι' see e.g. *in Ptol harm* 14.9 (cf 26.6); Epictetus, *diss* II xx 21; Simplicius, *in Cat* 387.18.

¹²⁰ The lemma in David, *in Isag* 199.10, has 'οἱ προσεργαζόμενοι' for 'προσεξέργαζόμενοι'. The omission of '-ξ-' is a slip; the addition of 'οἱ' is tempting—it implies that the elaborators of the account are distinct from its promulgators (so too Boethius, *in Isag*² 272.18: *alios*).

¹²¹ For the past tense at 12.7, 'ἔν', see above, p. 87 n. 102.

¹²² Lucian, *vit auct* 26: among the things you will learn from the Peripatetic philosopher, if you buy him, is the knowledge that 'men laugh and donkeys don't—nor do they carpenter or sail [οὐδὲ πλωζόμενοι]'.

¹²³ For 'συμπληρούν' see pp. 179-180; for 'parts' of substances etc see pp. 148-150; for 'τὸ εἶναι' as substance or essence see 9.21.

¹²⁴ See Dexippus, *in Cat* 49.4-8: a difference 'contributes to the substance' of the subject.

burning), but sometimes—as here—of active powers.¹²⁵—The phrase ‘those differences which are properly said to be specific’ is strange: does Porphyry imply that there are differences which are specific in an improper sense? But perhaps he means, against the word-order, ‘those differences, i.e. specific differences, which are called differences in the proper sense’.¹²⁶

Does the concluding sentence of the Chapter offer two general characterizations of specific differences or one conjunctive characterization? (And in the former case, is the ‘*καὶ*’ at 12.9 epexegetic?) In any event, neither of its clauses is very satisfactory: the first conveys the tautology that a specific difference is one which makes a species; and the second appears to state that any differentiating predicate which is essential is thereby differential. On the whole it seems best to take 12.9–10 as summarizing 12.1–9: a predicate which separates items in the same genus, or by which one group of things differs from another (in the same genus), is a differentiating predicate if and only if it is specific or essential.

¹²⁵ e.g. Strabo, XVI ii 44 [764]; Posidonius, frag 279 = Iamblichus, *myst* V 7; Galen, *meth med* X 483; Plotinus, *enn* II vi 2.29.—On the term see Todd, ‘EPITEDEIOTES’ (but, *pace* p. 26, there is no reason to think that the word was a technical term in the mouth of Philo of Megara—or anywhere else). Todd refers to Basil, *c Eunom* II 17; Didymus, *trin* I xv 46, where ‘readiness’ contrasts with ‘substance’.

¹²⁶ Boethius’ translation omits ‘*ἰδίως*’.

§4: PROPERTIES

There are four senses of ‘property’. [12.13–22]

§ 4 and § 5 are short: perhaps Porphyry thought that properties and accidents had less importance than the other three items for logicians, or at any rate for tiro logicians? Aristotle once says of properties that ‘dialecticicians rarely consider them for their own sakes’ (*Top* 120b14–15). But since he says the same of genera, he can hardly be construed as disparaging the study of properties—and Alexander supposes that the dialecticians do not deal with these matters because they require ‘a method more precise and more scientific than that of dialectic’ (*in Top* 296.15–17). Galen asserts that numerous errors are made by doctors and philosophers who have failed to engage in two studies:

By the two studies I mean that of distinguishing likes and unlikes and that of the method of dividing genera as far as the individuals and of the compounding which is its converse (namely the ascent from the particulars to the first genus through the intermediate differences). Of earlier doctors and philosophers Hippocrates and Plato made the finest and best discoveries about both these methods, and in their writings they showed up many things falsely said by those who do not know how to discriminate between what is common and what is proper. (*PHP* V 775; cf 752)

Galen puts the study of ‘likes and unlikes’, and hence of what is common and what is proper, on the same level as the study of division.

Porphyry gives a brief explanation of four sorts of property, and an indication that it is the fourth sort which is the real McCoy. Four sorts or four senses?¹ The commentators go for senses (e.g. Boethius, *in Isag*² 276.11–16); and they are probably right—at any rate it is difficult to find any genus under which the four items might be placed as species.

Porphyry’s definitions or delineations² are reasonably clear. The first two of them assert—roughly speaking—that X is a property of Y if and only if

¹ Above, pp. 50–52; 155–157.

² The commentators opt for delineations (e.g. Arethas, *in Isag* 111.29–31); the text offers no hint.

(1) X holds only of Y

and

(2) X holds of every Y.

Any gambler will wager that the third sense is the conjunction of (1) and (2), namely:

(3) X holds only of Y and of every Y.

After all, a property is what is proper to some item; and it is plausible to think that something is proper to an item if it holds of that item and of that item alone.

According to Simplicius,

Porphyry says that . . . properties are so called in three ways: what holds of every but not only—as biped of man; what holds only but not of every—as being learned of man; what holds both only and of every, which are properties in the strict sense—as laughter of man. (*in Cat* 93.10–15)

Simplicius is paraphrasing, not quoting; and he may well be paraphrasing the following passage:³

—First we must delineate what a property is: delineate it.

—I say that properties are so called in three ways, and that of the three ways one is the most strict.

—Tell me the three ways.

—A property is what is present to all but not only, or what is present only but not to all, or what is present both to all and only.

—Give examples.

—I would say that being biped is a property of men—this is an accident of all men but yet not of men alone since other animals too are biped. Again, I would say that being a rhetorician and being a goldsmith are properties of men—they are found only in men but not in all men. But you see that these are not properties in the strict sense; rather, what is present both to all and only, as laughing is present to all men and only to men. (Porphyry, *in Cat* 93.31–94.10)

The same trio—which is close to the trio (1), (2), (3)—is also found in Boethius (*in Cat* 190AB).

But (3) does not in fact appear in the *Introduction*. Instead of a trio there is a quartet and instead of (3) there are:

³ In Smith's *Fragmenta** the passage from Simplicius is printed as '60' of *ad Gedal*, the question-mark indicating that its source may rather be *in Cat*.

(3A) X holds only of Y and of every Y and at some time

and

(3B) X holds only of Y and of every Y and always.

There is something queer about the quartet. For just as (3A) and (3B) correspond to (3), so there correspond to (1) and (2):

(1A) X holds only of Y and at some time

(1B) X holds only of Y and always.

(2A) X holds of every Y and at some time

(2B) X holds of every Y and always.

The introduction of temporal modifiers enlarges the trio into a sextet: the trio and the sextet have a cohesion to them—the quartet does not.⁴ Then why opt for it? The anonymous ‘they’ at 12.13 are the Old Masters; so perhaps Porphyry found the quartet, explicit or implicit, in some magisterial text. But that turns one question into two: Why did the Master opt for the quartet? and why did Porphyry, in the *Introduction*, choose to follow this Master rather than another? It is tempting to guess that the quartet came from the commentators on the *Topics* and the trio from the commentators on the *Categories*. But that is speculation, and it explains nothing.⁵

A property in the first sense is ‘what is an accident of a certain species’ (12.13). ‘Is an accident of’ represents the Greek verb ‘συμβέβηκε’. The verb appears again at 12.15 in the account of the second sense, and it must be understood at 12.16, in the account of the third sense. Although Porphyry’s turn of phrase for the fourth sense is a little different, it is plain that a property in any of the four senses is an accident of something. So properties are accidents: Porphyry delineates ‘property’ in terms of the fifth member of his pentad, which is yet to be presented; and the fourth member is a special case of the fifth.

That is unhappy—and it conflicts with some later passages in the *Introduction*.⁶ But the word ‘συμβέβηκε’ may be taken neutrally, to

⁴ Boethius, in *Isag*² 277.17-19, supposes that an ‘always’ is implicit in (1) and (2). That only displaces the problem.

⁵ ‘Should we infer that the real lemma commented upon and reworked by Porphyry in the *Isagoge* is the tripartite one given in the commentary?’ (de Libera, *Isagoge*, p. 59 n. 92)—i.e. perhaps in *Isag* Porphyry elaborates an earlier tripartition. But at pp. 59-60 n. 93 (cf p. c n. 193) de Libera suggests that either *Isag* amplifies in *Cat* or else in *Cat* ‘corrects and simplifies’ *Isag*.

⁶ See below, p. 301.

mean 'hold of', rather than 'hold accidentally of'.⁷ (It has the neutral sense at 17.14–15—elsewhere in *Isag* it is associated with accidents: 13.1; 17.5; 21.7, 14.) In that case the infelicities are avoided: 12.13–16 says not that properties are accidents of species but that properties hold of species.

A property in the first sense, then, is what holds of a certain species (12.13). Species are also mentioned in the account of the second sense (12.15⁸); and they are doubtless to be understood for the third and fourth senses. (See 3.2, 13.12, 16.11, 14, 19.12–13, 20.19.) That is to say, if X is predicated properly of Y, then Y is a species or is predicated specially of some Z.

Aristotle is happy to speak of the properties of genera (e.g. *APr* 43b26–29; 70b18–20), and in the *Categories* he tries to determine the properties of each type of predication—that is to say, of items which Porphyry took to be highest genera, or genera which are not also species. Porphyry discusses these texts and never suggests that there is anything improper about seeking a property of a non-species. In the other direction, Aristotle frequently speaks in the *Topics* of properties of individuals;⁹ and Porphyry himself, at 7.21–26, refers without blushing to the proper features of Socrates and other individuals.

At *Top* 132b19–28 Aristotle urges that it is an error to cite a subject as a property of what is in the subject—for example, it is an error to cite fire as a property of the finest-textured body.

A subject will not be a property of what is in the subject for this reason: the same item will be a property of several items differing in species. For several items differing in species hold of the same item, being said of it alone, and the subject will be a property of all of them if properties are set down in this way. (132b24–28)

The argument is hard to unravel;¹⁰ but Aristotle plainly supposes that one and the same predicate cannot be a property of several items which differ in species. And that might have encouraged the view that Aristotelian properties apply to species alone.

⁷ See below, pp. 220–221.

⁸ But there Boethius does not translate 'τῷ εἴδει'.

⁹ e.g. 128b21; 129a5; 131b12. And note: 'By common, I mean praising Achilles because he is a man, because he is a demigod, . . . For these things hold of many others too . . . Proper are things which are accidents [*συμβέβηκε*] of no-one else apart from Achilles, e.g. killing Hector' (*Rhet* 1396b12–17). See Barnes, 'Property', p. 148. (Alexander, in *Top* 39.2–7, does not, *pace* Barnes, deny properties to individuals.)

¹⁰ See Barnes, 'Property', pp. 149–152.

Nonetheless, the restriction is arbitrary: there is no reason, either theoretical or historical, to deny properties to individuals or to highest genera.¹¹ Dexippus speaks with no apparent qualms about properties of individuals, species, and genera (*in Cat* 55.28–30); and in the account of property which Porphyry gives in *in Cat* the restriction to species is not mentioned.¹²

A property is (a) a predicate which holds only of members of a species. [12.13–14]

X is a property of Y if and only if, if X holds of something, then Y is specially predicated of it; or:

(I) X is predicated properly of Y if and only if, if X is true of a, then Y is predicated specially of a.

Porphyry's illustrations of (I)—doctoring and geometrizing, of man—are unremarkable, although they happen not to appear in Aristotle or Alexander.

The first sense of 'property' which Porphyry presents in *in Cat* is different: instead of 'alone, even if not of it all', we there have 'alone and not of it all'. The commentators read this into *Isag*.¹³ (They do the same for (II), where the same difference is found.) But their interpretation does not match the text of *Isag*. It is hard to decide whether this difference between *Isag* and *in Cat* is deliberate.

From the point of view of ordinary usage, (I) is acceptable enough. The noun 'property [*ἴδιον*] (which does not seem to appear before Aristotle) is a hardened form of the adjective 'ἴδιος'; and the adjective, in its ordinary use, generally signifies what is private rather than public, what is proper rather than common. An act proper to Achilles is an act which Achilles alone performed (*Rhet* 1369b17). A virtue proper to the wealthy is a virtue which the wealthy alone can possess—although not all the wealthy possess it. When Plato remarks that

¹¹ Still less, of course, to deny them to intermediates, or to genera which are also species—and some later passages seem to limit properties to lowest species: see below, pp. 262–263.

¹² And it is rare in other authors; but see e.g. Martianus Capella, IV 348.

¹³ e.g. Boethius, *in Isag*² 276.18–20; 277.7–9; Ammonius, *in Isag* 109.13–16; Elias, *in Isag* 89.14–20; David, *in Isag* 201.8–10. They falsely construe 'εἰ καὶ μὴ παντὶ' as 'provided that, in addition, not of it all' rather than 'even if not of it all'. (See Denniston, *Particles*, pp. 299–303.)

we would not ascribe these features to anything other than the soul, and we would say that they are properties of it, (*Rep* 353D)

he takes a property of souls to be a feature which souls alone possess.

Something like (I) is found in earlier texts—for example, in Cicero:

You ask for a property thus: Is ill-health an accident [*cadat*] only of man or also of beasts? (*Top* xxii 83)

And occasionally in later texts, for example:

What holds only of something is said to be its property—e.g. giving light of the sun, perceiving of animals, self-motion of souls. (scholia to Dionysius Thrax, *GG* I iii 118.3–4; cf 215.31–32)¹⁴

Or (b) a predicate which holds of every member of a species. [12.14–15]

(II) X is predicated properly of Y if and only if, if Y is predicated specially of a, then X is true of a.

Porphyry's illustrative example is surprising: being two-footed is surely a difference of man (so 19.19), not a property? But properties in sense (II) must include differences.¹⁵ In any event, 'biped' is not an accident of man, so that its presence in the text confirms the suggestion that Porphyry is using 'συμβέβηκε' in the broad or neutral sense.

(II) is rum: how can anything be proper to me if you too possess it?¹⁶ Well, Quintilian, for one, was not troubled by the notion:

A property is either what is an accident [*accidit*] only of the item—as speech or laughter of man; or else what is an accident but not only of the item—as heating of fire. (V x 58)

¹⁴ See also, perhaps, Dionysius of Halicarnassus, *rhet* xi 2; *Dem* ii 28; Plutarch, *fort Alex* 326D; [Plutarch], *sat* 571D.—(I) also appears in Martianus Capella, IV 347—but as the definition of 'accident'.

¹⁵ Cf. the use of 'property' in the following rhetorical text: 'There is no doubt but that a definition is shown by a genus and a certain property (or else an assembly [*frequentia*] of common items from which what is proper emerges)' (Cicero, *part orat* xii 41).

¹⁶ Porphyry's definition implies that if X is true of absolutely everything, then X is a property of snails.

Quintilian's two sorts of property correspond, approximately, to (I) and (II).¹⁷ Later, Simplicius reports the view of some anonymous interpreters of *Cat* 6b27:

They say that conversion is a property of relatives—not strictly speaking, as holding of all of them and of them alone, but rather as holding of all of them but not of them alone . . . and that it is called a property in accordance with the common usage which licenses us to call a property what holds of every so-and-so even if it does not hold of them alone. (*in Cat* 181.35-182.3)

Simplicius rejects the anonymous interpretation; but he does not express any opinion about the common usage with which it is fortified—and which elsewhere he tacitly acknowledges:

It is clear that this will be called a property of substance not as holding of everything (for a property which holds only and not of every is better than one which holds of every and not only—for properties like to compress) but as holding of it alone. And he defined property in this way in the fifth Book of the *Topics*.¹⁸ (*ibid* 113.24-27)

The issue will return.

Or (c) a predicate which holds only of a species, of all of it, and at some time. [12.16-17]

Porphyry means not that, at some time, the predicate holds only of the species and of all of it, but that the predicate holds only of the species and at some time holds of all of it. And to say that at some time the predicate holds of all of it is to say not that there is some time such that the predicate holds, at that time, of all of it, but rather that, for every member of the species, there is some time at which the predicate holds of it. Hence:

(III) X is predicated properly of Y if and only if (i) if X is true of a, then Y is predicated specially of a and (ii) if Y is predicated specially of a, then at some time X is true of a.

¹⁷ But a little later he expressly denies that 'biped' is a property of man: V x 61.—The presence of (II) disconcerted some readers: when Julius Victor came to plagiarize the passage, he omitted the second of Quintilian's two sorts of property: *rhet* vi 2 [398.29-30].

¹⁸ i.e. *Top* 128b34-36 (below, p. 217)? But neither there nor anywhere else does Aristotle offer the definition.

Porphyry's illustrative example—going grey in old age, of man—is, again, surprising: he has chosen, as something which holds of every member of the human species, a feature which, in Aristotle, is the paradigm of something which holds of men 'for the most part'.¹⁹ Worse, going grey in old age is not a property of man in the sense given by (III): 'greying in old age' is always true of Socrates—true of him as an infant and true of him as a dotard. The sometime property is not 'greying in old age' but 'greying', which is true of Socrates not always but at some time, namely in his dotage.²⁰

Or (d) a predicate which holds only of a species and of all of it and always. [12.17–22]

'X holds always of a' does not mean that, for any time t , X holds of a at t —for then a would be eternal. Rather, it means that, for any time t , if a exists at t then X holds of a at t . So:

(IV) X is predicated properly of Y if and only if (i) if X is true of a, then Y is predicated specially of a and (ii) if Y is predicated specially of a, then whenever a exists X is true of a.

Neither of Porphyry's illustrations—the risibility of men and the neighing of horses—is Aristotelian (although Aristotle affirms that 'man alone of animals laughs': *PA* 673a8²¹); but both became stock examples of properties.²² The gloss on laughing at 12.18–20 seems otiose in Greek,

¹⁹ e.g. *APr* 32b5–7; Alexander, in *APr* 162.6–9.—The oddity would be even more pointed if the second 'παντι' at 12.16 were kept. Boethius omits it, rightly: Porphyry says that X is a property of Y, not of every Y.

²⁰ Reading 'ἐν γηράτῃ' for 'τὸ ἐν γηράτῃ' would solve the problem.—Boethius sees that 'greying' (or, his own example, 'pubescent') is an example of this sort of property; but at one point he remarks: 'unless perhaps it is not being pubescent which is a property of man but rather being pubescent in youth' (in *Isag* 2 279.17–18).—According to Alexander, 'greying' is an accident of man (in *Top* 177.22–23); later, commenting on *Top* 134a5–11, he urges that you must add 'by nature' in order to get a property (ibid 399.29–400.4). For the addition see below, p. 209.—The example continued to be mis-handled: see Whately, *Logic*, II v 4.

²¹ David, in *Isag* 204.14–16: 'We say . . . that other animals too are capable of laughter—as Aristotle says in the *History of Animals* about the heron'. Not in our *HA*.

²² See e.g. 7.4–5; Lucian, *vit auct* 26 (of Peripatetics); Quintilian, V x 59; VII iii 2; Apuleius, *int* iv [192.16–23]; Galen, *meth med* X 149; Alexander, in *APr* 295.31–34; in *Top* 45.21–24; 235.23–25; Sextus, *PH* II 211; Clement, *paed* II v 46; Martianus Capella, IV 348; scholia to Dionysius Thrax, *CG* I iii 214.32; 361.2–6.—Note also Iamblichus, *protr* xxi [121.18–20]: 'laughter is a property of man compared to the other animals—indeed some people define man as a laughing animal'; for the definition see Pollux, VI 200 ('they

where the word I translate ‘laughing’ is ‘γελαστικός’ or ‘capable of laughing’; but 19.8 and 20.20-22 show that confusion in such matters is not far to seek. To say that men laugh is to say not that they are always laughing but that they are naturally equipped for laughter—and the equipment, being natural, is always with them.²³ Porphyry’s comment on the two examples need not be taken to indicate that properties, in the fourth sense, all belong by nature to their species; and Aristotle does not limit properties to natural attributes (e.g. *Top* 134a29-31; b5-10).

‘They say that these are properties in the strict sense’ (12.20); and when Porphyry discusses properties in the second part of the *Introduction* it is the fourth sense which determines his meaning.²⁴ They are properties in the strict sense ‘because they convert’. Converting (ἀντιστρέφειν), or being counterpredicated (ἀντικατηγορεῖσθαι) is a defining mark of Aristotelian properties,²⁵ and it is ubiquitous in the later tradition. A banal example:

What holds only of something and converts with it is called a property—e.g. being receptive of knowledge is a property of man; for if something is receptive of knowledge it is a man. (scholia to Dionysius Thrax, *GG* I iii 121.26-29; cf 361.2-6)²⁶

Conversion, mentioned without a gloss at 7.4, is implicitly explained by the illustrative example: ‘If horse neighing, and if neighing horse’. The telegraphese is normal from Aristotle onwards (see e.g. *Top* 102a20-22, Aristotle’s illustrative example of his own definition of ‘property’). The commentators took this to mean: ‘If anything is a horse it is a neigher, and if anything is a neigher it is a horse’.²⁷ They are right; and ‘properties convert’ means roughly that if X is a property of Y, then X is true

define man in this way because he alone of all animals laughs); and the elaborate discussion in Clement, *strom* VIII vi 21.1-6.

²³ The received text at 12.19 is more readily translated as ‘this always holds connaturally of him’: perhaps insert ‘ὅν’ after ‘σύμφυτον’?

²⁴ Note the ‘every and always’ formula at 16.15-16, 19.7, 21.2-3, 22.2 (cf Aristotle, *Top* 129a7; 131b7-9).—Just as (IV) is ‘the strict sense’ among the quartet, so (3) is among the trio: see e.g. in *Cat* 93.32; 94.10; Dexippus, in *Cat* 55.13-14; Simplicius, in *Cat* 92.16-17; 113.15-16; 181.35-36.

²⁵ See esp *Top* 102a18-20; 103b8-12; cf 132a4-9; 133a5-11; 135a14-19; 155a25-27. All these texts use ‘ἀντικατηγορεῖσθαι’. At *APst* 91a16 (see below, pp. 211-212) there is ‘ἀντιστρέφειν’; and at *APst* 73a6-7 Aristotle says that properties ‘follow one another’.

²⁶ Cf e.g. Martianus Capella, IV 348; V 479.

²⁷ e.g. David, in *Isag* 202.6-7; [Elias], in *Isag* xlii 11; note also Boethius, in *Cat* 190c. Boethius translates ‘quidquid equus et hinnibile . . .?’ (cf Apuleius, *int* iv [102.17]: *qui equus est hinnibile est*); but at 16.11-14, where the Greek of our MSS is entirely comparable, he offers ‘*si animal est, homo est . . .?* what Greek did he read at 12.21-22?

of everything of which Y is true and Y is true of everything of which X is true.²⁸ I say ‘roughly’ because the temporal modifiers in (III) and (IV) require a slightly more elaborate account of conversion, namely:

X and Y convert if and only if (i) if X is true of a at a time t, then Y is true of a at t, and (ii) if Y is true of a at a time t, then X is true of a at t.

It is plain that properties in sense (IV) convert and that properties in senses (I), (II) and (III) do not.

It is because they convert that properties in sense (IV) are properties in the strict sense.²⁹ Why ‘because’? Perhaps Porphyry means that the fourth sense of ‘property’ corresponds best to ordinary usage?

Properties are predicates, or terms, and their conversion is conversion of terms, not of propositions. In his account of the various sorts of logical conversion Alexander explains that

conversion of terms when the items are true together is also called conversion of propositions. Conversion of terms occurs when we interchange and make the subject term predicate and what was predicate subject, keeping the quality of the converted proposition the same. Now interchange of terms *simpliciter* in this manner is called conversion: e.g. Every man is an animal—Every animal is a man. Here the terms have been converted. When, in addition to the conversion, the propositions which are converted . . . are also true together, then the propositions are said to convert from themselves. (*in APr* 29.21–29)

(In Alexander’s sense, any pair of terms converts: it is not this which Porphyry has in mind when he speaks of the conversion of properties.) For example, universal negative propositions (‘No ducks are drakes’) convert in the sense that

If no A is B, then no B is A.

If no ducks are drakes, then no drakes are ducks.

Universal affirmatives (‘Every duck is a bird’) do not convert. But Alexander states that

Aristotle does not say that a universal affirmative never converts from itself; for it converts in the case of certain matter—i.e. in the case of items which are equal and properties. (*in APr* 35.2–4)

²⁸ See above, p. 142.

²⁹ At 12.21 the Greek reads ‘ὅτι καὶ ἀντιστρέφεται’: the ‘καὶ’ cannot mean ‘also’—presumably it is emphatic (‘because they in fact convert’, ‘because they convert’).

That is to say, Alexander thinks that universal affirmatives sometimes convert—namely, when they express properties; and this is presumably how he understands the common thesis that ‘properties convert’.

But the universal affirmative propositions which ascribe properties to species do not convert.

Every man laughs

does not convert; for it is not the case that

If every man laughs, then every laugher is a man.

If X is a property of Y, then every Y is X and every X is Y. Alexander has confused this truth with the different and false thesis that if X is a property of Y, then if every Y is X, then every X is Y. A similar error shows up elsewhere in Alexander.³⁰

Again, to say that properties convert is not to say that if X is a property of Y then Y is a property of X. Indeed, if X is a property of Y, then Y is not a property of X. For species are prior to their properties (20.18–20), and Y cannot be both prior and posterior to X. Since Aristotle does not limit properties to species, this brisk argument will not work for him; but he has an asymmetry of his own which guarantees that if X is a property of Y then Y is not a property of X—for an Aristotelian property must be ‘better known’ than that of which it is a property.³¹

Yet some Aristotelian texts go in the opposite sense. In the course of an aporetic discussion of the possibility of demonstrating definitions (*APst* 91a15–25), Aristotle invites us to take terms A and C, where A is a property of C, and to consider the following syllogism:

A holds of every B

B holds of every C

A holds of every C

He argues that

it is necessary for these items to convert; for if A is a property of C, then clearly it is also a property of B, and B of C—so that they are all properties of one another. (*APst* 91a16–18)

³⁰ See Barnes, ‘Logical form’, pp. 58–62.

³¹ See e.g. *Top* 129b2–5; 132b19–28; cf Alexander, in *Top* 382.20–21 (‘A property must not be unknown—properties are taken in order to get knowledge of the subject’). The point finds no echo in Porphyry.

The argument is this. Since A is a property of C, C holds of every A. But from that proposition, and the premiss that B holds of every C, we may infer that B holds of every A. But A holds of every B; so A and B are equivalent, and A is a property of B.

The argument implicitly invokes the third member of the Porphyrean trio:

(3) X holds only of Y and of every Y.

And the sense which it implicitly gives to 'property' might be explained thus:

(V*) X is predicated properly of Y if and only if (i) if X is true of a then Y is true of a and (ii) if Y is true of a then X is true of a.

(The asterisk indicates that the sense is not noticed in *Isag.*)

The argument also supposes that A may be a property both of B and of C. The same supposition is countenanced in an anonymous fragment sometimes attributed to Theophrastus:

Again, if A is a property of B in the same way as A is a property of C, then we shall both establish and refute. (PSI 1095, frag 1, II 5–9 = Theophrastus, Appx 2)

That is to say, in these circumstances if A is a property of B we shall infer that A is a property of C, and if A is not a property of B we shall infer that it is not a property of C.

The supposition has been thought scandalous: how can one and the same predicate be a property of more than one item?³² And one obscure, and perhaps corrupt, passage in the *Topics* implicitly rejects it.³³ But there is no scandal. X may hold of Y and of Y alone while also holding of Z and of Z alone, where Y and Z are different predicates: it follows that Y and Z hold of exactly the same items. But such innocent pluralism is implicitly forbidden by Porphyry. If X is predicated properly both of Y and of Z, then—according to Porphyry—both Y and Z are predicated specially, and hence predicated specially of the very same items. But two different predicates cannot be predicated specially of the very same items.

³² There is of course nothing odd about X's being a property in sense (II) both of Y and of Z.

³³ *Top* 138b16–18, on which see Reinhardt, *Buch E*, pp. 110, 185–189. Reinhardt takes this text to illustrate the standard view of *Top* according to which a property holds of one item only; and he thinks that in *APst* this view is abandoned and replaced by a weaker condition of co-extensiveness.

The Old Masters divide properties into four. [12.13]

Cleanthes the Stoic wrote a work 'On Properties' (Diogenes Laertius, VII 174); but nothing is known of its content—and the sense of its title is not sure. In any event, Porphyry's account of properties relies primarily on Peripatetic texts, and it derives ultimately from the *Topics*. But Aristotle's remarks on properties in *Top A* and *E* are not straightforward, and their relation to Porphyry is not plain.

Properties are introduced into Book A of the *Topics* thus:

Every proposition and every problem shows either a genus or a property or an accident . . . But since some properties signify what it is to be the item and others do not, let us distinguish property into these two parts, and let us call those which signify what it is to be the item definitions and let us designate the others by the name they have in common, namely properties. (101b17-23)

Thus the word 'property' has a general and a special sense.³⁴ Later, Aristotle explains the special sense:

A property is what does not indicate what it is to be the object but holds of it alone and is counterpredicated with it. (ibid 102a18-19)

Although Aristotle does not define the general sense, Alexander must be right when he says that

in general, a property is what holds of it alone and of all of it. (in *Top* 39.20)

That amounts to (V*). Hence the special sense may be defined thus:

(VI*) X is predicated properly of Y if and only if (i) if X is true of a then Y is true of a, and (ii) if Y is true of a then X is true of a, and (iii) X is not predicated essentially of the items of which Y is predicated.

(VI*) is the 'official' definition of properties in the *Topics*.³⁵ But even within the *Topics* certifiable occurrences of sense (VI*) are rare. Of the 36 argument forms listed in Book E, on properties, only three require it: the vast majority are indeterminate, and at least four require (V*).

³⁴ See Alexander, in *Top* 39.12-20, noting that such general/special ambiguity is common; cf ibid 114.11-16.

³⁵ In *Top* properties are officially asymmetrical, in the sense that if X is a property of Y, then Y is not a property of X (above, p. 211). Formulas (V*) and (VI*) do not guarantee asymmetry, and perhaps a further proviso should be added to or understood with them.

(For example, at 155a7–10 Aristotle argues that ‘if the predicate is not a property, . . . the definition is destroyed’. Plainly, if X is not a property of Y in sense (VI*), it does not follow that X is not a definition of Y. Here Aristotle must have (V*) in mind.)³⁶

Usually when Aristotle uses the term ‘proper’ its sense is governed by (V*), or by something close to (V*). And the same is true of other authors. Thus Chrysippus’ account of definition invoked properties:

a definition, according to Antipater, is an analytical account which is expressed commensurately; or, as Chrysippus says in *On Definitions*, a presentation of a property. (Diogenes Laertius, VII 60)³⁷

Chrysippus cannot have construed ‘property’ according to (VI*). Probably he construed it according to (V*), and Diogenes has given a truncated version of his account of what a definition is. Again, according to Plotinus,

in general, it is not possible to say what substance is; for it is not the case that if you present a property, you thereby have an answer to the question ‘What is it?’. (enn VI i 2.15–16)

Plainly, Plotinus does not think—as (VI*) dictates—that if you present a property you thereby present something which is not a definition.

It is true that (VI*) makes a few later appearances. Thus Alexander, commenting on *Met* 1022a35–36 (where the word ‘proper’ does not appear), remarks that

what holds only of and of all something is a property of it—provided further that it is not in its substance. (in *Met* 416.32–33)

But such cases are rare. Nevertheless, the commentators identify Porphyry’s (IV) with (VI*): property ‘in the strict sense’, David says,

can be presented thus: a property is a convertible accident—and that is a good definition. (in *Isag* 202.21–22; cf Elias, in *Isag* 90.16)

Here ‘convertible’ answers to clauses (a) and (b) in (VI*), and ‘accident’ to (c).

The identification is tempting—for it would be strange if the account of property in *Isag* omitted the official sense of the word in Aristotle. But there are objections. First, there is nothing in (VI*) which limits

³⁶ See Barnes, ‘Property’, pp. 140–142; Reinhardt, *Buch E*, pp. 29–31.

³⁷ Cf scholia to Dionysius Thrax, *GG* I iii 107.5–8—where the report is garbled or the text corrupt.

properties to species. (But this limitation is in any event a problem.) Secondly, (VI*) does not contain the 'always' which distinguishes Porphyry's (IV) from his (III). (But perhaps convertibility stands in for it.) Thirdly, there is nothing in (IV) which limits it to non-essential predicates. (But the commentators take the word 'συμβέβηκε' to do precisely that.)

However that may be, what does Aristotle say about (I) and (II) and (III)?

No-one calls a property what can hold of something else—e.g. sleeping of man—not even if at some time it happens to hold of it alone.³⁸ If such an item is to be called a property, then it must be called a property not simply but at a time or relative to something. For being to the right is a sometime property, and biped is in fact a relative property—e.g. a relative property of man with regard to horse and dog. (*Top* 102a22–28)

Aristotle here denies that items which satisfy (II) are rightly called properties.

Elsewhere he has been thought to take the opposite line. In his account of physiognomic signs, he notes that people with large hands and feet are likely to be courageous; for lions, courageous beasts, have vast paws. Having large extremities is a sign of courage; and

a sign is proper in this way: it is proper to the genus as a whole, and not proper to it alone as we ordinarily say. (*APr* 70b18–20).

Having vast paws is proper to lions, even though it is true of certain non-lions. (Were that not so, it could not be a sign.) Hence it is proper in sense (II). But Aristotle means that having large paws is proper to the genus of lions inasmuch as lions all have large paws and there is no other genus all of whose members have large paws. In other words, 'belonging to a genus all the members of which have large extremities' is a property of 'lion'—and a property in sense (V*).

Alexander notes that items which satisfy (II) are not thereby properties (*in Top* 46.17–25; cf 366.25–367.3); and he adds that the same goes for items which hold 'alone but not of every' (*ibid* 46.25–29). In other words, Alexander rejects (II), with Aristotle; and he also rejects (I), on Aristotle's behalf.

Porphyry indicates that (I)–(III) are not properties 'in the strict sense'; and the commentators take this to echo Aristotle's statement at

³⁸ For the modal element ('what can hold . . .') see below, pp. 268, 301.

102a22–28 (e.g. Elias, *in Isag* 90.3–6). Now what is F in an unstrict sense is surely still F; and to say that (I)–(III) are not properties in the strict sense is not to say that they are not properties. Nonetheless, although in *in Cat* Porphyry more than once insists that sense (3) is the strict sense (93.30; 94.3, 9), he then remarks:

Now since we are looking for a property of substances, if the feature in question is an accident of substances but not of them alone or of them alone but not of all of them, such things may be deemed to be properties but in truth they will not be—that alone will be a property which is present to substances alone and to every substance. (*in Cat* 94.10–13)

‘Properties’ in sense (1) or sense (2) may be thought to be properties; but in fact they are not properties at all. Boethius follows Porphyry:

This third type, which is inherent in all and only its subject, is truly a property; the two other types are called consequences [*consequētia*], not truly properties. (*in Cat* 190B)³⁹

The term ‘consequences’ derives ultimately from Aristotle, who expressly distinguishes between properties and ‘what follows an object’ (*APr* 43b1–5).

It is reasonable to infer that in *Isag* Porphyry meant (I)–(III) to be understood as pseudo-properties—that he meant to accept rather than reject Aristotle’s judgement.⁴⁰

The commentators go further: they identify Aristotle’s ‘sometime’ and ‘relative’ properties with Porphyry’s (I)–(III).

It is tempting to identify ‘sometime’ properties with properties in sense (III). But according to Aristotle, sleeping is a sometime property of men inasmuch as, at a given time, the only things asleep are men and all men are asleep. In other words, X is a sometime property of Y if and only if at some time X is a property of Y (in sense (V*)). That is quite different from (III).

Again, it is tempting to identify Aristotle’s ‘relative properties’ with (I) or (II). After all, biped, according to Aristotle, is a relative property of man—and biped is a Porphyrean example of a property in sense (II). Relative properties are treated at greater length in *Top E*, to which I now turn.

³⁹ See also scholia to Dionysius Thrax, *GG* I iii 361.1–11, for the distinction between property and consequence (*παρεπόμενον*); X is predicated consequentially of Y if and only if X is predicated accidentally of Y and also of some other item.

⁴⁰ Others allowed two sorts of property: thus Syrianus, *in Hermog* 99.19–24 (roughly, (I) and (V*)); anon, *in Hermog stat* VII i [251] (roughly, (III) and (IV)).

The whole book has been rejected as spurious; most scholars agree that it has been interpolated; and everyone finds parts of its first chapter hard to take.⁴¹ But such doubts troubled no ancient commentator and so are of no pertinence here. The discussion begins thus:

Properties are presented either in their own right and always or in relation to something else and sometime—e.g. in their own right: being a naturally tame animal, of man; in relation to something else: commanding and obeying, of soul in relation to body; always: eternal life, of gods; sometimes: walking in the gymnasium, of a certain man. (*Top* 128b16–21)

After an interruption—or perhaps an interpolation—the text continues by explaining that properties which hold of something in their own right separate it ($\chi\omega\rho\iota\zeta\epsilon\nu$) from everything else, whereas properties relative to something else separate it only from that something else (128b34–39); that always properties hold always, whereas sometime properties do not hold always and are not necessary (128b37–129a5); and finally that you can present properties relative to something else ‘either in all cases and always or for the most part and in most cases’ (129a6–16). The last point may be set aside—though it bears on one of Porphyry’s earlier examples.⁴²

Book *E* repeats from *A* the example of bipedality:

Giving a property relative to another thing is stating its difference . . . e.g. being biped is a property of man relative to horse; for men are biped, all of them and always, and no horse is ever biped. (129a6–10)

Relative properties are noticed by later authors. Thus Alexander:

Some items follow man without following his genus, animal. Of them, some are properties of man in the strict sense—e.g. laughing, deliberating; others are properties of man relative to other things—e.g. rational (for this is a property of man relative to non-rational things). (*in APr* 298.7–11)

(And ‘rational’, like ‘biped’, is a specific difference of man.) So too a grammatical scholium, which is worth citing *in extenso*:

Of properties, some are relative to a diverse item, some in itself. A property relative to a diverse item is something which separates it from other items—as stability is a property of science (for this separates science from art). A property in itself, which is called a property in the strict sense, is what separates it from all subjects, as when we say that having a soul receptive of knowledge is a

⁴¹ See Reinhardt, *Buch E*, who argues that the body of the book is Aristotelian but that a later redactor has added substantial passages. On E 1 see e.g. Sainati, *Storia dell’Organon*, pp. 118–120.

⁴² See above, p. 208.

property of man: this separates man from all the animals, since man alone is receptive of knowledge. To say that it is a property of man to have a soul does not separate man—except from soulless items: it does not separate man from horse and dog, since these things too are receptive of soul. (GG I iii 121.29–39)

Like properties in sense (II), relative properties are not properties ‘in the strict sense’. Nonetheless, they have their importance. And they have their importance in the second half of the *Introduction*: there Porphyry sets out ‘common and proper features’ of the five items—and by ‘proper’ he means, although he never says so, ‘relatively proper’.⁴³

So Porphyry might be expected to have noticed Aristotle’s relative properties—and why not allow that he does so in the guise of (II)? Well, there is some degree of similarity between the two things. But there is a difference: (II) does not define a relative property—it does not define ‘. . . proper to . . . relative to . . .’ but rather ‘. . . proper to . . .’. Properties in sense (2) of *in Cat* are connected closely to relative properties; for X is a property of Y in sense (2) if and only if there is some Z such that X is a property of Y relative to Z. But not even this equivalence holds for properties in sense (II). You might still urge that Porphyry’s sense (II) somehow takes over the work of relative properties. Nonetheless, Arethas is right to say that Porphyry omits Aristotle’s relative properties (*in Isag* 110.11–21).

Porphyry says that ‘they divide property in four’; and Alexander’s comment on the beginning of *Top E* is this:

He first says in how many ways property is spoken of, namely in four ways. (*in Top* 369.7–8)

Surely this is echoed at 12.13? Does not Porphyry’s quartet derive from *Top E*, or from a commentary on the book? In *Top E*—and in particular in 128b34–129a5—it is simple to discover four types of property:

- (A) in itself and always
- (B) in itself and sometime
- (C) relative to something else and always
- (D) relative to something else and sometime

⁴³ See below, p. 236.

But this is not Porphyry's quartet: (A) corresponds roughly to (V*); (B) probably picks up the sometime properties of *Top A*,⁴⁴ and (C) and (D) together cover relative properties. You might say that Porphyry is a little closer to *Top E* than he is to *Top A*. But he is not very close.

Alexander's 'four ways' are not (A)–(D). Rather, he thinks that the four types of property are: in itself, relative to something else, always, sometime. This is implausible; Alexander finds that his interpretation leads to difficulties; and Porphyry is no nearer to the Alexandrian quartet than he was to the Aristotelian.

The quartet in *Top E* suggests that the fundamental notion to be defined is not '... is a property of ...', nor even '... is a property of ... relative to ...', but rather something a little more complicated, namely: '... is a property of ... at ... relative to ... at ...'. Thus:

X is predicated properly of Y at t relative to Z at t^* if and only if (i) at t X is true of everything of which Y is true, and (ii) at t^* X is true of nothing of which Z is true.

This formula can be used to define the various specialized senses of 'property' which are found in the ancient texts—and others too.

⁴⁴ For 'a sometime property is something which is true for a certain time and does not always follow of necessity—like walking about in the market-place of a certain man' (129a3–5); and 'sometime properties we consider relative to the present time' (129a28–29).

§5: ACCIDENTS

Accidents come and go without the destruction of their subjects. [12.24–25]

Accidents are introduced, divided, and defined. There is no elaboration—Porphyry does not even follow the ‘Aristotelian canon’ of beginning with ambiguities.

Aristotle uses ‘accident’ in a variety of fashions. The noun ‘συμβεβηκός’ is a nominalized neuter past participle from the verb ‘συμβαίνειν’.¹ The verb means ‘happen’ or ‘happen to’; and very often Aristotle uses it as a synonym of ‘hold of [ὑπάρχειν]’.² A συμβεβηκός or accident, then, is anything which has happened, or anything which has happened to or holds of something. Such happenings may be necessary or contingent, essential or incidental—the term ‘accident’ is broad and neutral and tolerant.

Other philosophers use ‘accident’ in a neutral or broad fashion. For example, when Galen says of a certain phenomenon that

this property [*ἴδιον*], they say, is an accident [συμβεβηκός] of this genus of pulses compared to other genera, (*caus puls* IX 4)

he means no more than that the feature in question holds of the one genus and not of the others.³ In the neutral sense, any predicate which is true of an object expresses an accident of the object. Thus

anything which, when it is predicated of a name, makes an assertion <the Stoics> call a predication or an accidental [σύμβασις]—the two words mean the same. (*in Int* 84 = Ammonius, *in Int* 44.23–25; cf Diogenes Laertius, VII 64).

Nor is the broad use peculiarly philosophical. Grammarians sometimes say that nouns signify substances and verbs accidents—and that is merely a version of Aristotle’s assertion that ‘a verb is always a sign of

¹ So in Latin ‘accidens’ is the present participle of ‘accidere’: see Quintilian, III vi 36, for the Latin translation of ‘συμβεβηκός’.

² See e.g. *Met* 981a20; 1003a25; 1004b7; 1017a12–13.—On accidents in Aristotle see Ebert, ‘Akzidentzbegriff’; Brunschwig, ‘Conception de l’accident’; Ebert, ‘Accidents’; Tierney, ‘Symbebēkos’.

³ See also e.g. *PHP* V 333; *us part* IV 170; cf e.g. Plutarch, *quaest Plat* 1009E; Nicomachus, *intr arith* II xxv 2.

what is said of something else' (*Int* 16b7-8).⁴ And here is a pathetic example from real life:

Petenoupis to the priests at Tebtunis, greetings. Do not grieve at what has happened [*τοῖς συμβεβηκόσι*] to the village. (PHaun 1)

Aristotle also discovered a special sense for 'accident' according to which an accident of something is, roughly speaking, a contingent or non-essential accoutrement. The common Aristotelian formula 'by accident [*κατὰ συμβεβηκός*]' takes up this narrow sense of 'accident'; and what happens or holds or is 'by accident' contrasts with what happens or holds or is 'in its own right [*καθ' αὐτό*]' or *per se*.⁵

The distinction between the broad and the narrow senses emerges clearly in Book *K* of the *Metaphysics*: at 1061b27-30 [Aristotle] says that every science studies the accidents of its subjects; at 1064b17-19 he says that no science studies accidents. He means that sciences do not study the contingent, or what is accidental in the narrow sense; but they do, of course, study what holds of their subject-matter, or what is accidental to it in the broad sense. The distinction vexes the Aristotelian *Topics*; for although the term 'accident' is formally presented in a narrow sense, it is generally used in its broad form—and Aristotle never explicitly notices the fact.⁶

The broad sense of the term licenses and explains the phrase 'per se accident [*καθ' αὐτό συμβεβηκός*]'.⁷ A *per se* accident is anything which holds of an item in its own right—and it therefore contrasts with 'what holds accidentally [*κατὰ συμβεβηκός ὑπάρχοι*]'. There is nothing incoherent in the contrast—indeed, Aristotle might have spoken coherently of 'accidental accidents'.

In *Met* 4 30 Aristotle distinguishes two senses of 'accident'. The first is the narrow sense—or rather, a narrow sense. The second is explained thus:

Items are also called accidents in another way, e.g. what holds of each thing in its own right but is not in its substance—e.g. having two right angles of a triangle. (*Met* 1025a30-32)

⁴ See e.g. Dionysius of Halicarnassus, *comp. verb* v 33; scholia to Dionysius Thrax, GG I iii 360.13-14.

⁵ See above, pp. 170-171.

⁶ A broad use: 155a28-31; a narrow use: 120b33-34; see e.g. Sainati, *Storia dell'Organon*, pp. 70-78; Brunschwig, 'Système des prédictables'; Slomkowski, *Topics*, pp. 92-93.—Narrow uses also e.g. at *APr* 55a23, 31-32; *APst* 73b3-5; 74b11-12; 75a18-22; 83b19-20; *Met* 1007a21-22, 31-33.

⁷ e.g. *Met* 995b20; 997a18-25.—See above, p. 160.

The description ('e.g. what holds . . .') and the example show that he has *per se* accidents in mind. Commentators take him to mean that, in its second sense, 'accident' means '*per se* accident'. Hence 'accident' will have a broad sense—the sense which it has, say, in the formula '*per se* accident'—and also a number of narrow senses, one of which is '*per se* accident'. Perhaps this is right; or perhaps 1025a30–32 adverts to the broad sense of 'accident', and illustrates it with one of its more important applications.

Porphyry introduces 'accident' in a narrow sense without indicating that there is a broad sense. At 2.19–20 he had distinguished between common and proper accidents; and *Isag* is, in principle, interested only in common accidents—in accidents of ravens, say, rather than in accidents of this or that individual raven. But the term 'accident', as Porphyry defines it, does not mean 'common accident'.

Accidents are predicates which 'come and go without the destruction of their subject'. For example,

heat is a part of the substance of fire but in iron it is in a subject, since it both comes and goes in iron without the destruction of iron. (*ad Gedal* 55 = Simplicius, *in Cat* 48.24–26)

An iron rod is now hot, now cold—heat comes and goes while the bar remains. So heat is an accident of the iron. On the other hand, heat does not come and go from fire: hence it is not an accident of fire. (The text shows as clearly as could be desired that predicates are not accidents *tout court*. Heat is not an accident—it is an accident of the iron rod. And a predicate which is an accident of one item may hold non-accidentally of another.⁸)

The pair of verbs 'come and go [$\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$, $\dot{\alpha}\pi\sigma\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$]' is common enough—applied to living things, it amounts to 'be born and die'.⁹ I have not noticed the pair used of accidents in any Greek text earlier than Porphyry,¹⁰ who deploys them not only in the snippet from *ad Gedal* but also in a couple of pertinent passages in *in Cat*. First, in a text

⁸ See above, p. 66.

⁹ e.g. *ant nymph* 31; anon. *in Parm* VIII 34–35; Aristotle, *Phys* 262a28–b8; [Plutarch], *consol Apoll* 109F; Dio Chrysostom, *orat* xxxvi 29. Earlier ' $\dot{\alpha}\pi\sigma\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$ ' is coupled with ' $\pi\sigma\sigma\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$ ' (e.g. Zeno, B 3 = Simplicius, *in Phys* 139.11–15; Plato, *Tim* 82B; Aristotle, *Met* 1049a10–11) or with ' $\pi\alpha\pi\sigma\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$ ' (e.g. Plato, *Alc* I 126AB).

¹⁰ But Plotinus, *enn* VI vi 14.5–14 is close.—Later see e.g. Nemesius, *nat hom* 89 [25.3]; 124 [37.25–26]; Asclepius, *in Met* 367.2–3; Philoponus, *in GC* 43.14–15; Simplicius, *in Cat* 43.15–16 ('accidents in the strict sense arrive [$\pi\alpha\pi\sigma\gamma\acute{\iota}\gamma\nu\epsilon\sigma\theta\alpha\iota$] and go in the course of time'); *in Phys* 274.3–8; anon., *in Hermog stat* VII i 248.—For the Latin version see Additional Note (M).

which urges that differences are substantial qualities and hence not accidents,¹¹ Porphyry has this:

Substantial qualities are those which are compleutive of substances, and compleutive items are those which, if they go, destroy their subjects. Those items which come and go without destroying will not be substantial. For example, heat is present in hot water, and it is also present in fire; but in water it is not present substantially; for if the heat is taken away, the water is not destroyed in becoming cold . . . (*in Cat* 95.22-27)

Items which are not substantial—that is to say, which do not ‘complete the substance’ or form part of the definition, are accidents (*ibid* 95.33).

The second passage seems to tell in a different direction. According to Porphyry, a certain thesis about relative items shows that

they are not in their subjects either as compleutive of their substance or as some other sort of accident which comes about in the subjects themselves (e.g. an affection or an activity) but rather as something from outside. That is why they come and go without their subjects being affected. (*in Cat* 125.25-28)

This might be taken to mean that relatives are not accidents but rather ‘external’ adjuncts—and therefore can come and go without the destruction of their subjects. But Porphyry means that relatives may come and go without their subject changing in any ‘internal’ way: he does not say that relatives are not accidents—they are ‘external’ accidents.

The ‘destruction [*φθορά*]’ of something is its ceasing to exist—‘destruction’ is the opposite of ‘generation’ or ‘coming into being’. Myopic scrutiny of Porphyry’s expression will make it seem queer: going, not coming, is what counts.¹² But all Porphyry means is that accidents are those items ‘which, if changed, do not destroy the nature of the subject’. (So Boethius, *in Cat* 192A, probably copying Porphyry.) You might think of:

X is predicated accidentally of Y at t if and only if X is predicated of Y at t and not predicated of it at some other time.

But this is not what Porphyry means: if a shirt is pale buff from the hour of its confection to the hour of its destruction, pale buff is nonetheless an accident of it. What matters is not that a predicate actually does ‘come and go’ but that it can or may ‘come and go’. So:

¹¹ See Additional Note (L).

¹² So e.g. Pompeius, *comm* [GL V 201.10-11]: ‘That is called an accident which can also leave’; cf ‘*relinquentes*’ at Boethius, *div* 881A (above, p. 168 n. 35).

X is predicated accidentally of Y if and only if X is true of Y and it is possible that X not be true of Y.

As Aristotle says, ‘what is an accident can fail to hold’ (*APst* 75a20–21).¹³

Sometimes Aristotle offers a different account. The first sort of accident in *Met* Δ is described thus:

Something is said to be an accident if it holds of something—and it is true to say it of the thing—but neither by necessity nor for the most part: e.g. if someone found treasure while digging a trench for planting. (1025a14–16)

‘Neither necessarily nor for the most part’ (see also e.g. 1026b31–33; Alexander, *in Met* 437.20–21): the second clause has no counterpart in Porphyry.

Some accidents are separable, others inseparable.

[12.25–13.3]

That accidents may ‘come and go’ in this sense seems evident. But it caused perplexity in some quarters. Thus Philoponus refers to

the celebrated puzzle which is found in the definition of accidents in introductions: it was inquired how an accident comes and goes without the destruction of the subject—for a fever, while being an accident, destroys its subject. (*in An* 101.1–5)

A more serious puzzle is raised by inseparable accidents (which have already appeared at 8.13). For if accidents ‘come and go’, how can there be any inseparable accidents?

The problem was plain to Dexippus. Explaining that differences are not accidents, he notes that

a difference is not separated—unless it is co-removed with its subject. But if someone says that substantial accidents too cannot be separated without destruction . . . (*in Cat* 48.10–11; cf Simplicius, *in Cat* 98.11–13)

If someone says so, will Dexippus deny it? No: he will find some other way to distinguish between differences and accidents.

Dexippus is implicitly rejecting Porphyry’s account of accidents; and in doing so, he implicitly detects a contradiction between the account of

¹³ Cf e.g. *Top* 102b4–10 (below, p. 229); 144a23–26; *Phys* 256b9–10; *Met* 1059a2–3.

accidents at 12.24–25, according to which an accident can leave its subject without destroying it, and the division of accidents at 12.25–26, according to which some accidents are inseparable from their subjects. The point was not lost on ancient critics.¹⁴ But can Porphyry really have contradicted himself as overtly as his critics claimed?

Perhaps the term ‘inseparable’ should be taken in a weak sense? Perhaps ‘inseparable’ means ‘hard to separate’? Or ‘which in fact will not be separated’? Inseparable accidents are not, literally, impossible to tear off their subjects—rather, they will never be torn off. Yet it is difficult so to understand ‘inseparable’. Alexander notes, for example, that general predicates are inseparable—that is to say, cannot be separated (*in Met* 263.15–16); and he states, more generally, that

items predicated in the substance of something cannot hold and not hold of the thing; for by necessity, as long as the object is, they hold of it and are inseparable from it. (*in Met* 285.13–15)

The ‘and’ in the last line is epexegetic. Again, Boethius urges that not everything is necessary; for some things can be the case although it is not necessary for them to be the case—such as Socrates’ walking, and anything else taken from among separable accidents. (*in Int²* 384.24–27)

If Boethius specifies separable accidents here, that is because he takes inseparable accidents to be necessary.

Moreover, inseparable accidents surely include accidents ‘in their own right’ or *per se* accidents; and such accidents do not merely happen to stay with their hosts. Having an angle-sum of 180° is a *per se* accident of triangles: it holds necessarily of every triangle. Fire is necessarily hot, according to most authorities; but it was disputed whether heat was part of the definition of fire or rather a *per se* accident.¹⁵ And so on.

Perhaps indeed inseparable accidents should be identified with *per se* accidents? The identification would be convenient; and most of Porphyry’s text is compatible with it. Thus black is a standard example of an inseparable accident—of ravens (and of Ethiopians, coal, and ebony);¹⁶ and it is probably a *per se* accident of ravens (and the rest).

¹⁴ e.g. the anonymous interpreters at Ammonius, *in Isag* 111.12–18; David, *in Isag* 205.14–20.

¹⁵ See e.g. Porphyry, *ad Gedal* 55; *in Cat* 95.24–26 (both cited above, p. 222–223); *contra*, e.g. Simplicius, *in Cat* 181.32–33.—Boethius denies that necessarily fire is hot (*in Int²* 414.8–22).

¹⁶ See 12.26–13.1; 13.18–19; 17.1; 19.19; 21.16–17; 22.1, 6; cf 9.22.

On the other hand, other examples tell against the identification. Being blue-eyed is an acquired characteristic, and the shape of your nose (8.14; 9.13, 22) is not fixed at birth.¹⁷ Most evidently, a hardened scar is an acquired token—it was not a *per se* accident of Odysseus that he bore the mark of the boar. Arethas duly notes that inseparable accidents are of two kinds, the congenital and the acquired (*in Isag* 71.4–12); and we might then identify *per se* accidents with congenital inseparable accidents. Arethas correctly infers that an item may differ from itself in respect of a proper difference (*ibid* 73.1–16—he thinks that this poses a difficulty for Porphyry). Blindness, for example, is an acquired inseparable accident, and old Milton differed from young Milton in respect of it.

The notion of an acquired inseparable feature is not in itself obnoxious: an accident—we might suppose—is inseparable if its subject cannot lose it. He must possess it to the grave—but he need not have possessed it from the cradle. Thus:

X is an inseparable accident of a at t if and only if X holds of a at t and for all t^* after t, if a exists at t^* then X holds of a at t^* .

An inseparable accident is congenital if it holds of its subject from the beginning of its existence. Otherwise it is acquired.

But it is not clear that Porphyry intended to leave a space for acquired inseparable accidents. Nothing apart from his examples suggests that he did so; and the examples can be explained away. The scar, being a proper accident, is not pertinent to the *Introduction* (2.19–20); ‘blue-eyed’ might be glossed as ‘by nature such as to have blue eyes’, which is not an acquired predicate; and noses can be massaged into shape.¹⁸

However that may be, the primary puzzle remains: how can an accident be inseparable? The commentators find the solution at 12.26–13.3:

being black is an inseparable accident for ravens and Ethiopians—it is possible to think of a white raven and an Ethiopian losing his skin-colour without the destruction of the subjects.

The clause ‘it is possible . . .’ is intended to show how black is an accident of ravens and Ethiopians: to be sure, black is inseparable from ravens and all ravens are necessarily black; nonetheless, black may ‘come and go’, and hence is an accidental predicate, insamuch as you can think of or imagine a white raven.

¹⁷ And according to anon Syr, *in Isag* 249.38–42, ‘it is said that new-hatched ravens are white’.

¹⁸ For appeal to ‘by nature’ see above, p. 209.

An accident comes and goes; that is to say, it may come and go; that is to say, it conceivably comes and goes. Hence accidents are to be defined as follows:

X is predicated accidentally of Y if and only if X is true of Y and it is conceivable that X not be true of Y.

Now something which is conceivably absent may nonetheless be necessarily present; and just such an item is an inseparable accident. So:

X is an inseparable accident of Y if and only if necessarily X is true of Y and it is conceivable that X not be true of Y.

As the commentators put it, ‘come and go’ might mean ‘come and go in reality’ or ‘come and go in thought [$\epsilon\pi\iota\nu\omega\alpha$]’: Porphyry means it in the latter way—and so his account of accidents is coherent.¹⁹ Thus

items in a subject are separable either in actuality or in thought—in actuality, what we call separable accidents; in thought, inseparable accidents. (Olympiodorus, *in Cat* 66.36–38; cf Boethius, *div* 881BC)

Inseparable accidents are also separable—they are separable in thought, they ‘come and go’ in the land of the imagination.

It must be allowed that this interpretation of Porphyry’s text does not leap into the head. Nonetheless, it is the right interpretation. Moreover, it can be given a reasonably precise formulation. ‘Oviparous’, I suppose, is predicated accidentally of ravens—it is an inseparable accident of them, and a *per se* accident. That ravens are oviparous is necessary; and it is necessitated by the essence or definition of the raven—that is what makes it *per se*. But ‘oviparous’ is not part of the essence or definition of the raven—that is what makes it an accident. It is an accident because it can ‘come and go’; that is to say, because I can conceive of a raven which is not oviparous. And I can conceive of such a raven precisely insofar as ‘oviparous’ is not part of the definition of the raven.

The conceivability test became part of the tradition. It is developed thus by Ammonius:

These too [i.e. differences in the proper sense] are separable in thought; for I can think of Socrates both bald and hirsute. But a difference in the most proper sense I can no longer separate from him, not even in thought. For it is not possible to think of a man apart from rationality, since it will no longer be a man—

¹⁹ See e.g. Boethius, *in Isag*¹ 100.18–101.16; *in Isag*² 282.6–283.4; Ammonius, *in Isag* 111.17–18; David, *in Isag* 205.20–28 (though David himself rejects the solution); cf. e.g. Philoponus, *in Apst* 94.1–5.

for all men are rational (and all are mortal). Hence I can conceive of a snub-nosed man as hook-nosed, the same man remaining; but not of a man apart from rationality or mortality—for it is no longer a man. (*in Isag* 94.13–19)

Some problems were noticed. Arethas urges that certain inseparable accidents cannot be lost without the destruction of their subject; ‘for baldness being separated from Socrates, Socrates no longer exists’. This sounds bizarre; but Arethas recalls that individuals are constituted by their proper features:²⁰ baldness is a proper feature of Socrates; hence if I think of an item which is not bald, I am not thinking of Socrates. Arethas draws a strong conclusion: ‘individuals are not strictly substances, except by way of their subject’. That is to say, ‘Socrates’ does not designate a substance—rather ‘this man’ does. (See *in Isag* 67.35–68.8.) Archbishop Whately later raised the same question. According to him, ‘to be the author of the *Aeneid*’ and ‘to be a Roman citizen’ cannot be separated from Virgil, not even in thought. Nevertheless, they are accidents, and they are separable accidents—separable from the species. For ‘every accident must be separable from the species, else it would be a property’: we call inseparable those accidents which are separable from the species but inseparable from some individual. (See *Logic* II v 4.)

Inseparable accidents raise other questions, one of them concerning their relation to properties. This issue is best postponed until Porphyry himself tackles it.²¹ Here a word about the Ethiopian, who makes his first appearance at 13.1 (see 17.1–2, 12; 21.16–17; 22.1, 6). The Ethiopian is the subject for a sophism in Aristotle (*SE* 167a10–14), and ‘Ethiopian’ is an example of a general term in Alexander (e.g. *in APr* 215.11; 273.13–25). More interestingly, Alexander insists that Ethiopians are not a species, that ‘Ethiopian’ is not predicated specially of Haile Selassie (*in Top* 306.8–11). He is perhaps thinking of Plato, *Plt* 262E, and he is certainly repeating a widespread view: Greeks are not a species of man, nor Ionians a species of Greek because ‘Greek’ and ‘Ionian’ are accidentally predicated of their subjects (scholia to Dionysius Thrax, *GG* I iii 117.14–27). Yet there were voices on the other side: Seneca’s, for example (*ep* lviii 12); or Cicero’s (*inv* I xxii 32).²² What was Porphyry’s view? He

²⁰ Above, pp. 150–154.

²¹ See below, pp. 309–310.

²² Cicero says that the Thebans and the Trojans are genera (*sic*) of Greeks: Victorinus raps Cicero on the knuckles—being Theban or Trojan is an accident, and hence cannot be a species of man (*in rhet Cic* I 22 [211.35–212.17]). See also Sextus, *M* XI 15–17.

does not say; but 21.15–17 and 22.5–7 strongly suggest that he means the Ethiopians for a species.

They define accidents in two ways. [13.3–5]

The commentators say that Porphyry gives three accounts of what an accident is:²³ they take the ‘*kai*’ at 13.3 (which I have not translated) to mean ‘also’, and so to indicate that an earlier definition had been given—a definition which they find at 12.24–25. But the ‘*kai*’ at 13.3 is parallel to the ‘*kai*’ at 4.9 and should be interpreted in the same fashion, as having no semantic force.²⁴ Porphyry does not present three definitions from the Old Masters: he introduces the subject with a preliminary description, and he then turns to the magisterial definitions.

13.3–5 is a close paraphrase of a passage in the *Topics*:²⁵

An accident is what is none of these—neither definition nor property nor genus—but holds of the object; and also what can hold and not hold of any one and the same item. For example, sitting can hold and not hold of some one and the same thing, and so too white; for nothing prevents it from being now white and now not white. The second of the definitions of accident is better. (102b4–10)

Aristotle speaks explicitly of definitions (and so Porphyry’s ‘*όπιζονται*’ at 13.3 is to be taken seriously²⁶). The second of the two definitions is said to be better inasmuch as it does not, like the first, presuppose knowledge of genera, definitions, and properties (102b11–14). Another reason for its superiority has been extracted from the *Metaphysics*:

we say that someone who recognizes what an object is by what it is knows it better than someone who recognizes it by what it is not. (996b15–16)

Positive definitions are better than negative. Alexander notes that the positive definition of accident is superior inasmuch as it is based on the nature of accidents (*in Top* 48.16–21; *in Met* 185.9–13).

²³ So e.g. Ammonius, *in Isag* 110.15; 114.10, 15; David, *in Isag* 205.8–11.

²⁴ See above, p. 98 n. 15.

²⁵ Ebert, ‘Akzidenzbegriff’, p. 339, states that ‘in his surprisingly brief remarks on accidents, Porphyry relies exclusively on Aristotle’s *Topics*; in ‘Accidents’ he corrects himself—and affirms that Alexander’s *in Top* is also a major source (pp. 141–143).

²⁶ *pace* e.g. Elias, *in Isag* 91.10–23 (who talks of three delineations), and [Elias], *in Isag* xlvi 22 (who affirms that ‘*όπιζονται*’ at 13.3 is used loosely).

Porphyry's account differs from Aristotle's in a number of ways, seven of which may be mentioned. First, the order of Aristotle's definitions is reversed—perhaps Porphyry wanted to state the better definition before the worse.²⁷ Secondly, the 'and' which links the two definitions in Aristotle becomes an 'or' in Porphyry.²⁸ Perhaps Porphyry is replacing Aristotle's pair with a single disjunctive definition? and perhaps one disjunct covers separable and the other inseparable accidents? The suggestion is clever, but too incredible to merit discussion.

Thirdly, in the negative definition Porphyry replaces Aristotle's 'genus, definition, property' by 'genus, species, difference, property'—in order to accommodate it to his own pentad. If we take 'they define' at 13.3 with wooden literalness, we shall suppose that someone before Porphyry had adapted the Aristotelian definition—and hence that someone before Porphyry had developed the Porphyrean pentad.²⁹ But such literal-mindedness is supererogatory.³⁰

The fourth, fifth, and sixth differences are to be found in the phrase 'is always subsistent in a subject'. Fourthly, then, 'always' corresponds to nothing in the *Topics*. The addition might seem to restrict the Porphyrean definition to inseparable accidents—for separable accidents do not always accompany their subjects. But Porphyry does not mean 'Accidents are always present in their subjects, never leaving them'; he means 'Accidents are always found in a subject—never subject-free'.

Fifthly, Porphyry has 'a subject' where Aristotle has 'the object'. The 'object [$\pi\rho\hat{\alpha}\gamma\mu\alpha$]' is the item of which the accident is accidentally predicated—hence it is, of course, a subject. It is not the change from 'object' to 'subject' which makes the difference: it is the change from 'the' to 'a'. Of course, an accident is predicated of its subject; but, unlike Aristotle, Porphyry does not bother to say so—rather, he says that an item which is predicated accidentally of something is never subject-free.

Sixthly, Porphyry replaces Aristotle's 'hold of' by 'subsist in'. Here it is 'in', or rather 'in a subject', rather than 'subsist' which makes the difference. In *ad Gedal*, 'be in X as in a subject' is virtually synonymous with 'be an accident of X':

White, in the case of wool, is in a subject, but in the case of snow it is not in a subject but completes the substance as a part and is rather a subject in respect

²⁷ So Arethas, in *Isag* 114.25–27; de Libera, *Isagoge**, p. 61 n. 99.

²⁸ The Greek MSS, and Boethius' translation, have 'and' as a variant reading—a simple error, or a 'correction' based on Aristotle's text (some MSS of which carry 'or')?

²⁹ See above, p. 31.

³⁰ So e.g. Ebert, 'Akzidentzbegriff', p. 349 n. 12.

of substance. Similarly, heat is a part of the substance of fire but in iron it is in a subject, since it both comes and goes in iron without the destruction of iron.
(*ad Gedal* 55 = Simplicius, *in Cat* 48.21-26)

The ultimate reference is to Aristotle, *Cat* 1a20-b9: of things which exist, some are said of a subject and some are in a subject. What is said of a subject is universal, what is not said of a subject is individual; what is in a subject is an accident, what is not in a subject is a substance. Porphyry comments:

Aristotle presents as an informative and as it were conceptual³¹ account of accidents insofar as they are accidents the fact that they are in a subject. Thus just as there is no difference between saying man or rational mortal animal, so there is no difference between saying that something is an accident and that it is in a subject: if something is an accident, it is in a subject, and if something is in a subject, it is an accident. Later I shall show what he means by 'in a subject'.
(*in Cat* 73.22-27)

And at 77.18-78.21 Porphyry duly shows that an accident is 'in' a subject in the way in which a form is 'in' matter: it is inseparable from it.³²

Thus Porphyry's 'subsist in a subject' takes us away from *Top* and plunges us into *Cat*; and in writing (or adopting) the new clause, Porphyry replaces the Aristotelian banality by something more weighty.³³ Simplicius states that 'accidents are about substances and subsist in substances' (*in Cat* 62.4-5), a phrase which recalls 1.12 and Porphyry's refusal to swim in deep water—at 13.5, it seems, he dips his toe in it.

All accidents, separable and inseparable alike, are 'in' subjects and inseparable from subjects. Aristotle:

I say that something is in a subject if, not being in anything as a part, it cannot exist apart from what it is in. (*Cat* 1a24-25)

Porphyry explains that

Items which are in a jar can come to be apart from the thing they are in while continuing to exist. An accident, which is in a subject, cannot—he says—exist apart from what it is in, not because whiteness (say) is not separated from a body or its shape from bronze but because it does not continue to exist when separated (like wine separated from a jar). (*in Cat* 78.16-20)³⁴

³¹ See above, pp. 59-60.

³² The interpretation of *Cat* 1a20-b9 is disputable—and it was controversial in antiquity (see esp Simplicius, *in Cat* 44.3-51.27).

³³ Thanks to the change, 'this definition of accident, *pace* the commentators, is not entirely negative' (de Libera, *Isagoge**, p. 62 n. 100—Elias, *in Isag* 92.30-32, had already made the point).

³⁴ Reading '<ον> χωρίζεται' at line 19.

Moreover,

It is one thing to be separated and another to exist apart from something. He does not say that it cannot exist apart from what it was in but that it cannot be apart from what it is in—a perfume can be separated from what it is in, but it cannot exist apart in its own right. (ibid, 79.27–31)

Heat, for example, is inseparable from a subject, inasmuch as it cannot exist in its own right: it exists insofar as there is some subject—some body—which is hot; or better: for there to be heat is for there to be bodies which are hot. In addition, heat is an inseparable accident of fire, inasmuch as fire is necessarily hot. And further, heat is a separable accident of a hot poker, inasmuch as the poker may cease to be hot, perhaps transferring its heat to the water into which it was plunged.

Just as ‘substance [*οὐσία*]’ has a relative and an absolute use (man is a substance, being rational is part of the substance of man),³⁵ so ‘accident’ has a double use: heat is an accident, and heat is an accident of fire. Thus Martianus Capella offers two different accounts of accidents. In Book IV, on Dialectic, he says:

An accident is what holds of the item alone but not always—as rhetoric holds only of man but can also not hold, so that although someone is a man he may nevertheless not be an orator. (IV 347)³⁶

This is a version of the positive definition of accidents in the *Topics*. In Book V, on Rhetoric, he says:

An accident is what is found in something and is not a part of it nor can be separated from it so as to exist by itself—as colour in bodies, knowledge in minds. (V 480; cf 362)

This is ultimately from the *Categories*.

Capella allows us to imagine that he has defined one and the same item in two different ways, one of them more suitable to logic and the other to rhetoric. But he has defined two quite different things. Porphyry in effect fuses the two notions. Is the fusion a confusion? Or is it the case that X signifies an accident if and only if X is predicated accidentally of something? It is perhaps plausible to think that if ‘hot’ is predicated accidentally of a poker, then heat is an accident. On the other hand, it is perhaps implausible to think that, if primeness is an accident, then ‘prime’ is predicated accidentally of the prime numbers.

³⁵ See above, pp. 108–109.

³⁶ For the example see in *Cat* 94.7 (above, p. 202); Apuleius, *int vi* [197.16–17].

The seventh difference between Porphyry and Aristotle is best introduced by way of the following questions: Are the two definitions of accident, positive and negative, equivalent to one another? And are they equivalent to the introductory description at 12.24-25?

Alexander urges that Aristotle's two definitions are not equivalent: the positive definition accommodates only separable accidents, whereas the negative definition covers both separable and inseparable accidents. Alexander infers that, although in principle the positive definition is the better, in fact we must opt for the negative definition, on pain of incompleteness (*in Top* 48.16-51.17).

In the course of his long discussion, Alexander considers certain ways of rebutting the charge of non-equivalence. They invoke heterodox interpretations of the positive definition. One of the interpretations is this:

Again, it might be said that, even if they cannot both hold and not hold of these items, nevertheless they are able both to hold and not to hold of certain other items; and whatever has this relation to anything is an accident. (*in Top* 50.11-13)

In other words, when Aristotle says that an accident is 'what can hold and not hold of any one and the same item' (*Top* 102b6-7), he does not mean that X is an accident of Y if and only if X is true of Y and possibly not true of Y; he means rather:

X is predicated accidentally of Y if and only if X is true of Y and there is something of which X is both possibly true and possibly not true.³⁷

One passage in the *Topics* seems to support the interpretation:³⁸

In particular, consider whether the definition of accidents fits what has been presented as a genus, as in the cases we have mentioned. [Self-moving of soul, white of snow.] For it is possible for something to move itself and not to do so; similarly, to be white and not to be so. Hence neither of them is a genus but rather an accident, since we said that an accident is what can hold of something and not hold of it. (*Top* 120b30-35)

³⁷ The account was offered as a definition of inseparable accidents by Ockham (so de Libera, *Isagoge**, pp. 69-70, n. 143). It has been defended as an interpretation of Aristotle by Ebert, 'Akzidenzbegriff'; 'Accidents', pp. 143-147—against see Brunschwig, 'Conception de l'accident'. It finds a few echoes in other ancient texts, for example: 'And in another way: even if black holds inseparably of Ethiopians and of ravens, nevertheless it is of such a nature as to come and go in other items' (Philoponus, *in APst* 94.5-6).

³⁸ Adduced by Ebert, 'Akzidenzbegriff', p. 345.

‘White’, it seems, is predicated accidentally of snow inasmuch as there is something—a sheet, say—of which ‘white’ can hold and not hold. Perhaps ‘white’ cannot fail to hold of snow and of swans; it is nonetheless accidentally predicated of them inasmuch as it can fail to hold of various other items of which it holds.

This is strange stuff: since I can dye my shirt, swans are accidentally white. Alexander rejects the interpretation:

But this is not true—heat, for example, which holds of some items in such a way as to be able also not to hold, is not an accident of fire. (*in Top* 50.13–15)

Despite 120b30–35, the interpretation can hardly represent what Aristotle intended to say (see e.g. *Top* 144a23–27). And even were it adopted, it would not render Aristotle’s two definitions equivalent.³⁹

Nor does it fit his Greek at 102b6–7. The formula ‘what can hold and not hold of any one and the same item’ is not pellucid—in particular, the term ‘any one [$\dot{\omega}\tau\omega\iota\omega\hat{\nu}$]’ is difficult. But ‘X can hold and not hold of any one item’ does not mean that X can hold or not hold of something or other: it means that X can hold or not hold of anything you like. So Aristotle says something like this:

X is an accident if X both can hold and can not hold of anything at all.

What he means is presumably something like this:

X is predicated accidentally of Y if and only if, for any item under Y, it is possible for X to hold of it and possible for X not to hold of it.

In any event, whether or not the unorthodox interpretation fits Aristotle, it does not fit Porphyry: the Aristotelian clause ‘of any one and the same item’ becomes ‘of the same item’, and there is no toehold in Porphyry’s Greek for the unorthodox.

Alexander rehearses another unorthodox interpretation of Aristotle’s positive definition:

That which, even if it does not hold, does not destroy the subject can [$o\hat{\iota}\hat{\o}\nu\tau\epsilon$] hold and not hold even if it holds inseparably. For what is outside the substance and nature of an object, even if it is not possible [$\delta\hat{\u}\nu\hat{\iota}\hat{\alpha}\tau\hat{\alpha}\nu$] for it not to hold of it, signifies that it can [$\hat{\epsilon}\nu\delta\hat{\epsilon}\chi\epsilon\sigma\theta\alpha\iota$] hold and not hold of the same object. And an accident will be that which holds of the object when the destruction of it does not destroy that of which it holds. (*in Top* 50.1–6)

³⁹ See Ebert, ‘Accidents’, pp. 149–152.

The two Greek terms ‘δύνατον’ and ‘ἐνδέχεσθαι’ are normally taken to be mutually equivalent, if not synonymous.⁴⁰ The interpretation which Alexander is canvassing distinguishes between them. What distinction is meant? Alexander’s text is dark; but perhaps the notion is that ‘can . . . not hold’, in the positive definition, should be taken as ‘can be imagined . . . not to hold’.

Alexander rightly rejects the interpretation—for Aristotle. But it is appropriate for Porphyry; for 13.1-2 has already suggested it. The commentators note that you might think Porphyry’s two definitions to be non-equivalent, and they explain that a closer attention to the text and to the sense of ‘can’ will overcome the difficulty.⁴¹ Thus the problem which, according to Alexander, embarrasses Aristotle’s two definitions does not embarrass Porphyry’s twins.

It does not follow that the twins are equivalent. If they are, then—where X is true of Y—the following two theses must hold:

(I) If it is conceivable that X is not true of Y, then X is predicated neither generally nor specially nor differentially nor properly of Y.

And also:

(II) If X is predicated neither generally nor specially nor differentially nor properly of Y, then it is conceivable that X is not true of Y.

(II) is true; for conceivability is determined by the elements in the definition of Y, and those elements are predicated either generally or differentially of Y. (I) is false: if X is predicated properly of Y, then it is conceivable that X is not true of Y.

⁴⁰ So e.g. at Aristotle, *Int* 22a15-16; the distinctions introduced at *APr* 25a37-39 have nothing to do with the definition of accidents.

⁴¹ e.g. David, in *Isag* 206.36-207.2; Elias, in *Isag* 91.27-92.6 (with appropriate reference to 13.1-2).

§6: A COMMON FEATURE

Now let us survey the common and the proper characteristics of the five items. [13.6–8]¹

For common features Porphyry sticks to the term ‘κοινός’;² for proper or differentiating features he occasionally uses ‘ἰδιός’ but generally prefers the verb ‘differ [διαφέρειν]’.³ When ‘proper’ is used in these contexts it means ‘proper in relation to the other item or items in question’,⁴ an Aristotelian use of the word which Porphyry does not record in § 4.⁵ The verb ‘διαφέρειν’ alludes to differences in the common sense of the word ‘διαφορά’.

Why does Porphyry consider common and proper features, similarities and differences? The programme which he set for himself has already been completed; and the second half of the *Introduction*, although it adds a number of points not noticed in the first, does not purport to modify—nor even to confirm—what has already been said. It has been suggested⁶ that Porphyry has his eye on a remark by Plotinus: dialectic, Plotinus says,

is a disposition capable, with respect to each item, of saying in a formula what each item is and in what it differs from other items and what it has in common. (*enn* I iii 4.1–4)

(Plotinus is thinking of Plato, *Polit* 285AB.) Perhaps Porphyry has his other eye on Aristotle:

—Since, in the case of each of the other types of predication, <Aristotle> has looked for what they have in common with each other and also what each has peculiarly its own, does he do the same thing here?

—Yes indeed. (*in Cat* 135.26–27)

¹ At 13.6 Boethius’ gives ‘*igitur*’, which suggests that he read ‘δῆ’ (so Busse) or ‘οὖν’ rather than the ‘δέ’ of the Greek MSS. (See 17.23, note.)

² 13.10, 23; 14.10; 15.7, 10, 12; 16.2, 6, 20; 18.11, 13; 19.5, 7, 17, 18; 20.12; 21.5, 21. Also *κοινότης*: 20.7; 21.6; 22.11; and *κοινωνία*: 22.12 (and in the subtitles).

³ *ἰδιός*: 14.14; 18.16; 19.11; 21.9; also *ἰδούτης*: 20.7; 22.11.—*διαφέρειν*: 15.15; 16.9; 17.4, 14, 15, 16, 17, 18, 20, 21, 22, 22, 23, 24, 25, 26, 26; 18.1, 2, 3, 3, 4, 5, 6; 19.21; 20.8, 9, 9, 17; 21.10; 22.5. Also *διάκρισις*: 22.12.

⁴ So explicitly Boethius, *in Isag* 297.3–12; 310.14–16; 342.16–18.

⁵ See above, p. 218.

⁶ By Shiel, ‘Greek copy’, p. 317.

Porphyry proposes to do for his five items what Aristotle had done for the ten types of predication.⁷

13.6-8 suggests that Porphyry will compare any genus (say) with any difference. But at 14.19-20 he remarks that, when comparing a genus and a difference, you must consider the divisive differences of the genus (14.22), not the constitutive differences (and surely not the differences of some other genus). Again, 15.11-12 implies that genera will be compared with the species falling under them and not with any species whatever. In general, the comparisons among the five items are conducted within the family: a genus is compared with the species (and the subspecies) which fall under it, with the differences which divide it and which constitute its species, and with the properties and accidents of its species.⁸

After noting a feature common to all five items, Porphyry considers the items two by two. Why not next rehearse the features which four of the five items have in common? Then three, and then two? (The first difference between genus and difference, at 14.14-20, is actually presented as a difference between genera and the other four items.) To be sure, the pairwise strategy should pick up any features common to four or to three of the five items. Suppose that there is a feature possessed by genera and species and differences but not by properties and accidents: the pairwise strategy should catalogue it three times—among the common features of genus/difference, genus/species, and species/difference. But the strategy makes for repetitions; nor does Porphyry carry it through consistently.⁹

In any event, Porphyry's discussion of similarities and differences is avowedly incomplete (22.11-13; cf 15.7-8). The commentators made it their habit to add further points—'Let us add, according to our custom . . .' (David, *in Isag* 214.20-21).¹⁰

⁷ But in *Cat* the common and proper items are parts of the account of what a given category is, not adjuncts to such an account; for Aristotle 'first gives the common feature and then the proper, because each existent item is grasped in its substance by both its common and its proper accounts' (Simplicius, *in Cat* 175.17-19).

⁸ The commentators do not discuss the point; but they take it for granted—note, e.g., the way in which Boethius illustrates 14.14-20 at *in Isag* 298.6-11.

⁹ For the inconsequentiality of Porphyry's practice consider the feature of being predicated of several things. Being common to all five items (13.10), it is common to every pair. Porphyry notes it for genus/species (15.10—with a back-reference), for genus/accident (16.20—with a back-reference), for difference/accident (19.17), and for species/accident (21.5). He does not mention it in connection with the other six pairs.

¹⁰ Cf. e.g. *ibid* 211.8-17; 217.27; Ammonius, *in Isag* 119.11-19; Elias, *in Isag* 96.22-97.5.

**All five items are predicated of a plurality of things.
[13.10–21]**

The commentators observe that the discussion in § 6 indicates not only a common feature but also certain differences among the five items (Elias, *in Isag* 93.11–15; David, *in Isag* 209.15–21). They also observe that there are other and more exciting common features. Thus the anonymous Syriac commentary remarks that if any one of the five items exists, then so do the other four; that is to say, if an item has a predicate in one of the modes, it has a predicate in all of the modes.¹¹

All five items are predicated of a plurality of things¹²—but, Porphyry adds, in different ways. And he notes that all five items are said of the individuals under them,¹³ and that genera, differences, properties, and accidents are said of species.¹⁴ According to Boethius, ‘it may seem curious that he does not say that a genus is predicated of properties nor even that a species is predicated of its properties’ (*in Isag*² 289.5–6)—and that he omits several other cross-predications from his list. Why so? ‘The question is deep and there is no time to resolve it here’ (*ibid* 290.13–14). But the answer depends on the fact that

some items are predicated directly, others obliquely—that a man moves is direct, that a moving item is a man is put forward with the expression inverted. (*ibid* 290.15–18)

According to Boethius, Porphyry lists all and only the ‘direct’ predications. The distinction to which Boethius appeals is Aristotelian in origin;¹⁵ but nothing in the text suggests that Porphyry has it in mind.

Porphyry says that genera are predicated of their species and of the individuals under the species, but he does not say in what mode they

¹¹ anon Syr, *in Isag* 251.25–252.16. So too, briefly, David, *in Isag* 209.1–3—where this is one of five additional common features (208.25–209.4; cf Elias, *in Isag* 93.30–94.3).

¹² The point is trivial. For one-membered species see above, pp. 100–103—similar remarks should be made about one-membered differences or properties.

¹³ At *in Isag*² 280.7–8 Boethius—according to the MSS—reports Porphyry as saying that genera are predicated of species and of differences. The *editio princeps* of Boethius’ commentary emended ‘*differētis*’ to ‘*individuū*’; and it is plain that either Boethius or a copyist has slipped. (The received reading is not justified by 287.13.)

¹⁴ Compare Aristotle, *Cat* 3a37-b2: species are predicated of individuals, genera of species and of individuals, differences of species and of individuals.

¹⁵ ‘Direct’ is the same as ‘natural’ predication (on which see below, p. 327 n. 15); cf Apuleius, *int* vii [199.17–200.7], for the difference between inferring *directim* and *reflexim*.—For the omission of self-predication see above, p. 84.

are predicated. In fact, if X is predicated generally of a species, then it is predicated generally of every member of the species. On the other hand, if X is predicated properly of a species, it does not follow that it is predicated properly of every member—it follows that it is not predicated properly of any member.¹⁶ Some issues of this sort are not without their interest. For example, Aristotle claims that ‘a difference is a species of nothing’ (*Top* 107b33)—that is to say, if X is predicated differentially of anything, then it is not predicated specially of anything—so that ‘white’, being predicated differentially of sounds and specially of colours, is an ambiguous word (*ibid* 107b33–36). Porphyry does not raise such questions.¹⁷

13.20–21 introduces a new point: accidents are said principally of individuals and only secondarily of species. The word ‘principally [$\pi\tauογγονυμένως$]’ is frequently contrasted with ‘accidentally’ and with ‘consequentially’; sometimes, as here, it contrasts with ‘secondarily’.¹⁸ In his commentary on the *Categories* Porphyry offers an explanation:

- What is ‘principally’ and what ‘accidentally’?
- Principally is what is such-and-such in its own right, accidentally what is so in virtue of something else. Thus all the items we have mentioned are quantities principally, whereas e.g. something white is called large accidentally and not insofar as it is white but because the surface in which it is is large. (*in Cat* 105.13–17)

And Boethius explains why accidents hold principally of individuals:

Every accident comes first to individuals and then to secondary substances; for since Aristarchus is a grammarian and Aristarchus is a man, a man is a

¹⁶ The point is made by David, in *Isag* 218.1–5—as a further difference, unnoted by Porphyry, between genera and properties.

¹⁷ Ebert, ‘Gattungen’, p. 124 n. 25, says that ‘Aristotle’s thesis that “every predicate predicated of anything” belongs in one of the four classes . . . seems to me, in this unqualified form, imprudent: What is it if e.g. the property of a genus is predicated of a species (of the genus)?’ Or in what mode is a species predicated of one of its properties?—Given that Aristotle’s tetrad offers an exhaustive and exclusive classification (below, pp. 303–304), every predication falls into one of the four classes; but it does not follow—and perhaps it is not true—that all species (say) are predicated of their properties in the same mode.

¹⁸ Contrasted with ‘accidentally’: e.g. Theophrastus, *de igne* 14; Aspasius, *in EN* 145.7–10; Galen, *dign puls* VIII 848; Alexander, *in APr* 256.23–25; *in Met* 438.19–24. With ‘consequentially’: e.g. *in Ptol harm* 6.21–22, 27–28; Alcinous, *didask* iv [154.15–17]; Aspasius, *in EN* 81.28–30; Sextus, *M VII* 34; Plotinus, *enn* IV iv 24.36–38. With ‘secondarily’: e.g. Arius Didymus *apud Stobaeus*, *eccl* II vii 5b⁵; Ammonius, *in Int* 32.8–10; 48.4–6; 57.26–28. There is a more elaborate set of contrasts at Epictetus, *diss* III xiv 7.

grammarian—thus every accident comes first to an individual, and that accident will be thought to come in second place to species and genera of substance. (*in Cat* 182c)¹⁹

That is to say, if X is predicated accidentally of a species or of a genus, that is because or insofar as it is predicated accidentally of the individual members of the species or genus.²⁰

There is a different account of the matter in Ammonius. The context is interesting enough to warrant a longish citation:

It is not only with reference to individuals that quantifiers make their determinations: if the subject of the proposition is a genus, then they will attach principally to the species which fall under that genus when what is predicated of it is something substantial, and secondarily of the individuals under the species, since the individuals cannot partake in the genus save by the mediation of their own species. So when we say

Every animal is a substance,

or

Some animal is winged,

since the predicates hold of the subjects in respect of their substance, you will say that substance is principally predicated simply of all species of animals, and winged of those species which naturally participate in it, and because of them of the individuals under the species. Sometimes we make assertions about species alone, as when we say

Every species of quality composed of parts with position is a species of the continuous,

or

Every natural species in the world has its own subsistence.

It is clear that, since accidents are post-substantial²¹ and by nature such as to hold and not hold of the same items, we shall say that they are predicated principally of individuals, which are of a nature such as to change in all ways both in respect of accidents and in respect of substance, and not strictly of species, which cannot in any way participate in them because of their incorporeal and invariable nature. (*in Int* 89.18–36)

¹⁹ Cf *in Cat* 189c; 226b; *in Isag*² 289.2–4. Boethius claims to find the point in Aristotle: 'for example, you will call an individual man literate; and so you will also call a man, and an animal, literate' (*Cat* 3a3–4).

²⁰ So too Ammonius, *in Isag* 116.16–117.2—who thinks that the point holds for all accidents, and also for properties.

²¹ See below, p. 298.

The last point comes from Proclus.

In the notes on the *Metaphysics* which he took down from Ammonius' lectures, Asclepius refers to the thesis that accidents hold principally of individuals.

Proclus admired nothing more in Porphyry's *Introduction* than this, as our teacher Ammonius says. For species, being incorporeal, do not possess accidents in themselves—the demiurge's account of the raven is not black; rather, the species is said to be black accidentally inasmuch as it is observed in the particular individuals, i.e. in the singular ravens. (in *Met* 142.34–143.3)

The 'demiurge's account' of the raven is the universal raven 'before the many'. To say that it is not black is to say, in needlessly lurid fashion, that it is not necessarily the case that all ravens are black. And that fact has nothing to do with incorporeality.

In any event, there is no reason to read Proclus' explanation into Porphyry's text. It is because this, that, and the other raven is black that ravens are black. It is not because this, that, and the other raven is a bird that ravens are birds. If you want to explain why Rebecca is a bird, or is oviparous, you may say: Well, she's a raven, and ravens are birds, or are oviparous. If you want to explain why Richard is black, you will not say: Well, he's a raven, and ravens are black.

The point is true for separable accidents. Not so for *per se* accidents: having an angle-sum of 180° is a *per se* accident of triangles; yet it is because this figure is a triangle that it has such an angle-sum. In general, *per se* accidents, while not being part of the nature of their subject, are explained by that nature. (Demonstrative syllogisms reveal the fact.) And *per se* accidents are predicated principally of the species or genus and secondarily of the individuals.

Porphyry's remark at 13.20–21 is syntactically indeterminate; but it is more readily taken to refer to separable accidents alone rather than to accidents in general. On the other hand, when Porphyry repeats the point at 17.8–10, he apparently applies it to accidents in general. And it was taken to be true for at least some inseparable accidents: eye-colour, for example, is an inseparable accident; but it is to be explained in terms of the matter of which eyes are made and not in terms of form or of any substantial predicate.

§7: GENERA AND DIFFERENCES

Porphyry catalogues three similarities and six differences.

(S1) **Genera and differences alike contain species.**
[13.23–14.3]

Later, Porphyry will note that genera contain species (15.15–16) and that differences contain accidents (19.21–20.3).¹ There are other cases which he does not note—and the point is intimately linked to the issue of priority.

The plural ‘species’ is to be taken seriously; for genera and differences are all predicated of several items different in species.²

Porphyry also anticipates a dissimilarity (see 14.14–20): a genus contains every species made by each of its divisive differences, whereas one member of a set of divisive differences does not contain the species contained by another.

(S2) **What is predicated of a genus is predicated of the species under the genus, and what is predicated of a difference is predicated of the species under the difference.** [14.3–10]³

And so—though Porphyry does not say so—of all the five items: what is predicated of Y is predicated of everything under Y. For if Z is under Y, then Y is predicated of Z; and if X is predicated of Y and Y of Z, then X is predicated of Z—predication is ‘transitive’.

There is no need to select for a universal those items which an item contained by it follows—e.g. for animal, what man follows. For necessarily, if animal accompanies man, it also accompanies all of these items. (Aristotle, *APr* 43b29–31)

¹ For ‘contain [$\pi\epsilon\rho\iota\acute{\chi}\epsilon\iota\nu$]’ see p. 114; for ‘ $\pi\epsilon\rho\iota\epsilon\kappa\tau\iota\kappa\oslash$ ’ of genera and species see e.g. Alexander, *in Top* 322.13; Plotinus, *enn VI* ii 2.6–7.—For the ‘potential’ containment of differences by genera (14.20–21) see below, pp. 247–248.

² But for differences see above, pp. 191–193.

³ The ‘ $\tau\epsilon$ ’ in line 3 is co-ordinate with the ‘ $\tau\epsilon$ ’ in line 4, so that the sentence has no connecting particle. Busse proposes ‘ $\langle\kappa\alpha\rangle\ddot{\sigma}\sigma\alpha$ ’ on the basis of Boethius’ ‘*et quae-cumque*’—but that is simply ‘ $\ddot{\sigma}\sigma\alpha\tau\epsilon$ ’.

If X follows or is predicated of Y,⁴ and Y follows Z, then X follows Z. This principle underlies Aristotle's first type of syllogism, Barbara (*APr* 25b38-40); and it follows immediately from the thesis stated at *Cat* 1b10-15—

If Y is predicated of Z, then if X is predicated of Y, X is predicated of Z

—which Porphyry took up at 7.8-19.⁵

Porphyry does not say simply that what is predicated of X is predicated of what is under X. He adds a qualification: what is predicated of a genus *as a genus* is predicated of what is under the genus, and what is predicated of a difference *as a difference* is predicated of what is under the difference. What is the force of the two italicized clauses?⁶ My English translations are ambiguous between (a) 'X is predicated, as a genus, of Y' or 'X is predicated generally of Y', and (b) 'X is predicated of Y insofar as Y is a genus'. The Greek text demands (b). Boethius' translation supposes (a).⁷

What does (b) and the Greek mean? Ammonius says that 'he adds "as a genus" in the sense of "as an object" . . . e.g. what is predicated of animal as animal . . .' (*in Isag* 117.20-23). How might you predicate something of animal not as animal? Well, you may predicate 'trisyllabic' of animal—and then (if you are sane) you are predicating the item of animal not 'as an object' (not as animal) but as word. More generally, the phrase 'as a genus' is intended to exclude 'relational and nominal predication' such as 'Man is a species' and 'Animal is trisyllabic' (Ammonius, *in Cat* 80.32-81.16).⁸ X is predicated of a genus as a genus if and only if it is true of every member of the genus. And just as 'substance', being predicated of 'animal', is therefore predicated of 'man', so 'reason-user', being predicated of 'rational', is therefore predicated of 'man'.

⁴ For 'follow [*επεσθαι*] and its synonym 'accompany [*ἀκολούθειν*] see below, p. 262.

⁵ See above, pp. 144-145. There is a hitch: see Additional Note (N).

⁶ For similar clauses see 3.16-17; 15.11-12.

⁷ His 'ut genus' translates 'ὡς γένος' rather than 'ὡς γένους' (but his interpretation would sit better with 'ut genera' for 'ὡς γένη'); his ambiguous 'ut differentiae' must be taken for 'ὡς διαφοραί' rather than for 'ὡς διαφορᾶς'.

⁸ Cf Simplicius, *in Cat* 52.9-18; Ammonius, *in Isag* 117.5-118.5 (cf *in Cat* 31.2-12); Elias, *in Isag* 95.20-96.2; David, *in Isag* 210.15-28; [Elias], *in Isag* xlvi 8-12.—The notion that 'Man is a species' is a relational predication is found already in Dexippus, *in Cat* 26.29-31.

The Ammonian interpretation is not self-evident; but at least it seems to fit Porphyry's curious example—using reason and being rational.⁹ Boethius, who takes (a) rather than (b), says that using reason is a species or mode of being rational—another species or mode is having reason. His understanding of the text is supported by 14.12, where using reason is one way of being rational. He thinks that, just as substance is predicated generally of animal and hence of man, of which animal is generally predicated, so too using reason is predicated differentially of rational and hence of man, of which rational is differentially predicated. (See *in Isag*¹ 104.9–105.9; *in Isag*² 293.18–294.21.)

The Boethian interpretation makes good sense for general predication; but it is difficult for differences. When Porphyry says that 'using reason' is predicated of rational items, Boethius must take him to mean 'of some rational items'; and likewise he must suppose Porphyry to mean that a difference of a difference is a difference of some species under that difference.¹⁰

(S3) If a genus is removed, then everything under it is removed; and if a difference is removed, then everything under it is removed. [14.10–12]

Removal will return.¹¹ The following remarks are provisional.

Wishing to show that 'perceivable items remain if perception is removed',¹² Porphyry remarks that

were someone to destroy all animals—as, according to the Stoics, happens at the conflagration—, then there will be no perception since there are no animals, but there will be perceptible objects—for fire will exist. (*in Cat* 119.33–37)

The 'removal' of perception is effected by bumping off the perceivers. Again, Ammonius:

⁹ Elias (who read 'angel' for 'god' at 14.1: above, p. 198 n. 117), says that 'angels do not use reason, inasmuch as they possess only internal reason and not expressive reason' (*in Isag* 96.29–30). The point puzzled Pope Silvester II, who was impelled to write an essay *de rationali et ratione uti* (I take this from Maioli, *Porfrio**, p. 143 n. 5).

¹⁰ i.e. at 14.9–10 he must take 'τῶν . . . εἰδῶν' to mean 'some of the species'.—A trifling point about 14.6–7: 'these items are also predicated of all the species under animal, as far as the individuals [ἄχρι τῶν ἀτόμων]'—as far as and including or as far as and not including? (Exactly the same ambiguity at Aristotle, *Met* 998b28–29: μέχρι τῶν ἀτόμων.) At 5.23–6.1 'ἄχρι' is exclusive, at 6.13–14 and 7.9–10 it is inclusive.

¹¹ See below, pp. 248–249.

¹² Cf Aristotle, *Cat* 7b35–8a6 (below, p. 362).

If we want to remove an affirmation and make a negation, we should attach the negative particle, which is the cause of the removal, not to the less but to the more dominant part of it; for in the case of animals—or rather, of living things in general—it is not any part but one of the dominant parts which, being removed, destroys the whole. (*in Int* 87.13-18)

Removal may be a bloody exercise.

Thus 'Animal is removed' might be taken to mean 'There come to be no animals'. But innumerable texts make it plain that this is wrong: 'Animal is removed' is merely a picturesque way of saying that there are no animals—it does not imply that in fact there are, or once were, some animals.

Thus (S₃) is illustrated by the fact that if there are no animals, then there are no men, and if there are no rational items, then there are no men. It may seem to be a universal truth, holding of all five Porphyrean items, that

If X is true of nothing and Y is under X, then Y is true of nothing.

But although Porphyry would no doubt extend (S₃) to species, and perhaps also to properties, he would not allow it to hold for accidents—you may remove black, say, without removing ravens.

The principle underlying (S₃) is not the universal truth, but rather: Necessarily, if X is true of nothing and Y is under X, then Y is true of nothing.

And this principle is not unrestrictedly true: it is true only where Y is necessarily under X—that is to say, where necessarily Y is true of everything of which X is true. 'Raven' is under 'black' inasmuch as all ravens are black; but 'raven' is not necessarily under 'black' inasmuch as it is not necessarily the case that all ravens are black.

What 'necessarily' signifies here is a delicate question, which must be postponed.¹³

(D1) **A genus is predicated of more items than is a difference.** [14.14-20]

The point is implicit at 14.1—and it is Aristotelian :

¹³ See below, pp. 250-251.

Since some people think that differences too are predicated of species in answer to ‘What is it?’, genera should be separated from differences by using the following elements: first, a genus is said more widely than a difference . . . (*Top* 128a20–23; cf e.g. *Met* 1014b9–15)

Moreover—as Porphyry immediately adds—the point is not peculiar to genus and difference. Rather, a genus holds of more things than does any of the other four items.¹⁴ That is to say, where X is a genus and Y a species, difference, property, or accident (in the family), X holds of every Y and it is not the case that Y holds of every X. The point is evident for species and for properties, less so for differences and for accidents.

As for differences, might not one and the same difference divide several genera? Might not nut-eating differentiate some species of birds and also some species of mammals? Then the genus will not be wider than the difference, ‘bird’ not being predicated of everything of which ‘nut-eating’ is predicated. Aristotle’s position on the matter is fluid.¹⁵ Alexander is clear:

The appropriate divisive differences of something do not extend further than that which they divide. (*mant* 169.11–12: below, pp. 349–350)

And perhaps Porphyry meant to affirm the same doctrine. But he appears to say something stronger, namely: if X is a divisive difference of Y, then necessarily if X is predicated of a then Y is predicated of a. But even if divisive differences are limited to a single genus, why should not a predicate which is divisive of a genus also hold, as an accident, of non-members of the genus? Squirrels have ‘nut-eater’ as a differential predicate; but it is an accidental predicate of me. Such cases are, however, excluded by the theory of divisive sets.¹⁶

The case of accidents is easier to deal with. ‘Black’ is an accident of ravens, which are a species of bird. Yet ‘bird’ is not predicated of more items than is ‘black’: ‘bird’ is not predicated of ‘black’, not all black items are birds.¹⁷ The objection is old.¹⁸ It found two answers in antiquity.

¹⁴ But the point is not repeated for all other pairings.—Porphyry’s expression at 14.14 is awkward: the phrase ‘τὸ ἐπὶ πλεόνων κατγγορεῖσθαι’ will inevitably be read as ‘to be predicated of several items’, and the ‘ηπερ’ comes as a jolt.

¹⁵ See Additional Note (K).

¹⁶ See above, p. 179.

¹⁷ De Libera makes things worse by translating ‘ἐπ’ ἐλαττόνων’ by ‘a still smaller number’ (see also Boethius, *in Isag*¹ 106.14–15): accidents are less populous than species and differences. The Greek means ‘fewer than the genus’.

¹⁸ See Boethius, *in Isag*¹ 106.20–23; Ammonius, *in Isag* 118.20–24; David, *in Isag* 212.12–17.

Boethius recalls that accidents are said primarily of individuals and only secondarily of species (13.20-21). Hence genera, being predicated of species and of differences and of individuals, are predicated of more items—that is to say, of more types of item—than accidents which are predicated only of individuals. This gives Porphyry a true thesis; but it is not the thesis which he announces. David says that

one must add that the genus is predicated of more items than are those accidents which are found in it; for animal is predicated of all the species under it, but bald is not predicated of all the species under animal. (*in Isag* 212.14-17)

That is to say, ‘bird’ is predicated of more items, not than ‘black’ but than the black items under it—‘black’ is predicated of more items than is ‘black and bird’. David’s correction¹⁹ will ensure that an accident is never more populous than a genus; but it will not guarantee than a genus is always more populous than an accident: ‘has some weight’ is co-extensive with the genus of every species of which it is an accident.

[Elias] takes the objection to be sound, and asserts that genera differ from accidents in ‘the manner of their holding’ and not ‘according to quantity’ (*in Isag* xlvi 25-26).

(D2) A genus contains its differences potentially.

[14.20-21]

But—so we should understand²⁰—a difference does not contain its genus. (D2) appears to be (D1) with the addition of ‘potentially’. That is to say, if X is divisive of Y, then—potentially—every X is Y but not every Y is X. The reason offered in favour of (D2) is hopeless: the fact that some animals are rational and others non-rational hardly serves to show that everything rational (and everything non-rational) is, potentially, an animal. Again, ‘potentially’ is odd: why qualify a thesis which has already been affirmed without qualification?

The commentators refer to 11.4-5, where Porphyry claimed that animal, say, is potentially rational and also potentially non-rational.²¹ The reason offered for (D2) then becomes intelligible, if hardly sparkling. But at 11.4-5 Porphyry wanted to show that differences are predicated of or contain their genus. Here he speaks in the opposite

¹⁹ Accepted e.g. by Tricot, *Isagoge**, p. 36 n. 2.

²⁰ The point is supplied in some of the Greek MSS.

²¹ So e.g. Boethius, *in Isag*² 299.22-300.2.

sense: genera contain their differences. The commentators implicitly suppose that the word ‘contain [$\pi\epsilon\rhoιέχειν$]’ is here a synonym for ‘have [$\epsilonχεῖν$]’; and that would be singular.²²

(D3) A genus is prior to its differences. [14.21–15.2]

So too a genus is prior to its species (15.18), and to their properties (16.9) and accidents (17.3–4). Again, genera and species are prior to what is under them (15.12–13); differences are prior to species (18.21–24); species are prior to accidents (21.12–15). Aristotle distinguished several types of priority: four in *Met* 4; five at *Cat* 14a26–b23 (cf in *Cat* 118.24–119.3). One of them is called ‘natural’ priority:

Things are prior by nature and in being if they can exist without the others but the others cannot exist without them. (This is the division which Plato used.²³) (*Met* 1019a1–4)

At 15.18 Porphyry states that genera are ‘naturally prior’ to their species, and at 17.9–10 that genera and species are ‘naturally prior’ to individuals. (Note also 21.14–15.) The commentators are no doubt right to suppose that in (D3) the priority is natural.

According to Simplicius,

the more recent thinkers are accustomed to call prior in this way that which is co-introduced but not co-introducing and co-removing but not co-removed. (*in Cat* 419.25–27)

And the commentators speak of two canons or rules of natural priority:

- (1) Fs are prior to Gs if and only if F co-removes but is not co-removed by G.
- (2) Fs are prior to Gs if and only if F is co-introduced by but does not co-introduce G.

The two rules are taken to be equivalent.²⁴

Numerous late texts appeal in one context or another to co-removal (the verb is ‘συνανατρεῖν’) and co-introduction (‘συνεπιφέρειν’ or

²² So read ‘έχειν’ for ‘περιέχειν’?

²³ No passage in Plato’s dialogues is pertinent, and it is generally assumed that Aristotle is thinking of Plato’s oral teaching.

²⁴ See e.g. Ammonius, *in Isag* 118.7–8; David, *in Isag* 211.34–36; cf e.g. Boethius, *in Cat* 183BC; 288D–289B; *inst arith* I 8; Ammonius, *in Cat* 74.19–21 (cf 35.13–15); John of Damascus, *dial* 7.

‘συνεισάγειν’). It is clear that F co-removes G if and only if, F being removed, G is thereby removed; and that F co-introduces G if and only if, F being introduced, G is thereby introduced. It is clear, too, that removal and introduction are opposite sides of the same medal: if ‘F is removed’ means ‘There exist no Fs’,²⁵ then ‘F is introduced’ means ‘There exist Fs’.

A formulation of the two rules which fits a vast number of the pertinent texts is this:

- (1A) Fs are prior to Gs if and only if (i) if there are no Fs, then there are no Gs, and (ii) it is not the case that if there are no Gs, then there are no Fs.
- (2A) Fs are prior to Gs if and only if (i) if there are Gs, then there are Fs, and (ii) it is not the case that if there are Fs, then there are Gs.

It is easy to verify that (1A) and (2A) are equivalent.

(1A) and (2A) do not do explicit justice to the word ‘thereby’ which featured in the informal account of co-removal and co-introduction. The word was not casual: consider the use of ‘thereby’ and of ‘necessary’ in the following passage from Boethius:

But if, a man being posited, there is an animal, whereas if an animal is named it is not necessary for there to be a man, then animal is prior to man.

. . . animal, when removed, removes man too together with itself; but when introduced—so that an animal is said to exist—it does not thereby introduce animal together with itself.

Posterior items are the other way about: introduced, they thereby introduce; but removed, they do not remove. For once man is said, he introduces animal together with himself (for every man is an animal). But if man is existentially removed, it is not necessary that animal too is removed, since the name animal may fit several species. And if that is so, when man is removed animal will remain. (*in Cat* 288d–289b)

‘Necessary’ and ‘thereby’ are not omnipresent in the pertinent texts;²⁶ but they should be understood where they are not explicit. So the rules are to be taken as follows:

- (1B) Fs are prior to Gs if and only if (i) necessarily if there are no Fs, then there are no Gs, and (ii) it is not the case that necessarily if there are no Gs, then there are no Fs.

²⁵ See above, pp. 244–245.

²⁶ For *Isag* note ‘certainly [πάντως]’ at 15.16–18.

(2B) Fs are prior to Gs if and only if (i) necessarily if there are Gs, then there are Fs, and (ii) it is not the case that necessarily if there are Fs, then there are Gs.

As for Porphyry, the *Introduction* associates priority with unilateral co-removal in the present passage and also at 15.18–19 and 18.21–23 (cf 16.17–18). Porphyry does not appeal to co-introduction; nor does he explicitly mention the rules of priority. But that is of no significance. At *in Cat* 118.1–16 he explains natural simultaneity, with a forward reference to chapter 13 of Aristotle's work:

—What items do you say are simultaneous?

—Those which both co-introduce and co-remove one another; for when certain items simultaneously co-introduce and co-remove one another, then they are simultaneous. (*in Cat* 118.4–6)

And a little later:

There are several kinds of priority and posteriority—for such items too are so called in several ways. The way we are looking for here is the following: we call prior that which co-removes and is not co-removed—e.g. the monad is prior to the dyad. For if the monad is removed it removes the dyad, but if the dyad is removed it does not remove the monad. So in respect of removal, what removes is prior to what does not co-remove. And in respect of being, that which is such that if it is, then necessarily something is, is posterior to that which, if it is, it is not necessary for something to be²⁷—for if the dyad is, it is necessary for the monad to be, whereas if the monad is it is not necessary for the dyad to be: therefore the dyad is posterior to the monad. . . . Thus removal is the reverse of existence: what co-removes and is not co-removed is prior, what co-introduces and is not co-introduced is of necessity posterior. (*in Cat* 118.24–119.3)

How should the necessity be understood in these texts? At 13.1–2, possibility was to be understood in terms of conceivability or thinkability.²⁸ The verb 'think of' turns up again at 15.2: so the necessity invoked by the rules of priority ought to be glossed in terms of conceivability. Thus:

(1C) Fs are prior to Gs if and only if (i) it is inconceivable that there are no Fs and yet there are Gs, and (ii) it is not inconceivable that there are no Gs and yet there are Fs.

(2C) Fs are prior to Gs if and only if (i) it is inconceivable that there are Gs and yet no Fs and (ii) it is not inconceivable that there are Fs and yet no Gs.

²⁷ The text at 118.31–32 is corrupt: the sense is plain.

²⁸ See above, pp. 226–228.

(That (1C) and (2C) are equivalent is evident—indeed, you may think that there is only one rule there.)

That some Platonists sometimes understood the rules of priority according to version (C) is demonstrable. Nicomachus, in the course of arguing for the priority of arithmetic over geometry, remarks that ‘such items <as triangles and squares> cannot even be conceived [$\epsilon\pi\nu\omega\epsilon\hat{\iota}\sigma\theta\alpha\iota$] without the numbers which they co-introduce’ (*introd. arith.* I iv 4). In the same context Nicomachus uses something like version (B) of the rules, and also version (A): (A) was shorthand for (B), and the modal operators in (B) were interpreted in the sense of (C). In general, although the ancient texts usually give the rules in version (A), the intended sense is conveyed by (B); and sometimes, at least, (B) is understood as (C).

At 15.2 the text imposes version (C); and several other passages welcome, or at least permit, such an interpretation. But there are also recalcitrant texts—places where (C) renders Porphyry’s argument dubious or worse. Porphyry and Nicomachus apart, explicit invocation of conceivability is rare; and it is difficult to judge whether a text which does not explicitly appeal to conceivability nonetheless relies on that notion.²⁹

What is the relation between the rules of priority and priority itself? At 14.22 the remark about co-removal is presented as a corollary of priority (‘which is why . . .’: cf 15.18–20): it appears to be a separate and consequential fact rather than the same fact in a different cloak. So too Boethius says that genera are prior to their species and

hence [*hinc*] it is also true to say that if a genus is removed the species at once perishes, if a species is removed the genus continues with its nature unremoved. (*div* 879BC)³⁰

On the other hand, it is indisputable that there is an equivalence between being prior and satisfying the rules of priority, in this sense: Fs are naturally prior to Gs if and only if F and G co-remove and co-introduce in the manner specified by the rules. And several texts encourage the hypothesis that this equivalence amounts to a definition of the term ‘naturally prior’: What does it mean to say that Fs are prior to Gs?—Simply that F and G are related as the two rules specify. The point will return.

²⁹ On the rules of priority see further Additional Note (O).

³⁰ Aristotle sometimes places priority and unilateral co-removal in simple conjunction (*Top* 123a14–15); but at least once he infers the former from the latter: ‘Genus and difference co-remove species, so that they are prior to species’ (*ibid* 141b28–29).

A genus is prior to its divisive differences—so Aristotle had stated: A difference must be posterior to the genus and prior to the species. (*Top* 144b10–11)

Hence a genus co-removes and is not co-removed by its differences. For example,

(I) If there are no animals, then there are no rational items,
whereas

(II) It is not the case that if there are no rational items, then there are no animals.

Claim (II) is unexceptionable: even if there is nothing rational, there may still be some non-rational items—and some non-rational animals. But in the text Porphyry claims more than he need and more than (II): he claims that a genus will not be removed even by the removal of all its differences. This claim was disputed. After all, an animal is necessarily either rational or non-rational: if there are neither any rational items nor any non-rational items, then there cannot be any animals. In general, remove all the divisive differences and the genus is thereby removed. So, for example, Quintilian:

A genus has no power to establish a species, the greatest power to refute one—not: because there is a tree there is a plane; but because there is not a tree there is not a plane . . . A species is a sure proof of a genus but a feeble refutation—because there is justice there is certainly virtue; because there is not justice there can still be virtue if there is courage, integrity, self-control. So a genus is never removed by a species unless all the species under the genus are removed, thus: because there is neither immortal nor mortal there is no animal. (V v 56–57—quoted by Iulius Victor, *rhet* vi 2 [398.19–27])

(Quintilian speaks of species; but, as he last example shows, the point applies equally to differences.)

The objection is clear, and apparently correct. But it is here that version (C) of the priority rules shows its mettle, and it is here that Porphyry appeals to conceivability: ‘even if <the differences> are all removed, a percipient animate substance can be thought of—and that is what animal is’ (15.1–2). That is to say, Porphyry construes (II) as

(II*) It is conceivable that there are no rational items and yet some animals.

And he maintains not only (II*) but also:

(II**) It is conceivable that there are no rational items and no irrational items and yet some animals.

The conceivability affirmed in (II**) depends on the fact that neither 'rational' nor 'irrational' is part of the definition of 'animal'. The definition of 'animal'—as of anything else— involves its genus and its constitutive differences (an animal is a corporeal substance which is animate and percipient): it does not involve its divisive differences. In general, a divisive difference is never part of the definition of the genus; hence the genus can always be conceived of without its divisive differences.

But if (II**) and hence (II*) are thus defensible, the same cannot be said for:

(I*) It is inconceivable that there are no animals and yet some rational items.

For (I*) will be true only if 'animal' is part of the definition of 'rational'; and in general, (D₃), so construed, will hold only if a genus is part of the definition of each of its divisive differences.

(D₄) A genus says what its subject is, a difference says what sort of thing it is. [15.2-4]

The point is familiar since 2.15-17 and 3.5-14. Similar remarks for genera and accidents (17.10-13), differences and species (18.16-21), species and accidents (21.9-10).

(D₅) A species has a single genus and several differences. [15.4-6]³¹

But the species man has several genera—animal, animate body, body, etc. David suggests that the unique genus of man is substance, and that the only true genera are highest genera, other 'genera' being in reality differences (*in Isag* 212.26-30). Man, then, has the single genus, substance, and a whole string of differences. But this does not fit Porphyry's example.

³¹ Rough parallels of the 'one/several' form at 16.10-11; 20.17-18; 21.10-12; 22.5-9.

According to Boethius, Porphyry means that a species has a single proximate genus (*in Isag*² 301.17–21). That is trivially true. But Porphyry must then be taken to say that every species consists of a proximate genus and at least two constitutive differences, so that all definitions will rely on complementary division or *ἐπιδιαιρεσίς*.³² Recognizing that this need not always be so, Boethius interprets the text as meaning not that a plurality of differences is always present but rather that ‘several differences may be present’ (*in Isag*² 301.21–302.1). Just as differences generally, but not always, hold of items different in species, so species generally, but not always, have a plurality of proximate differences. This is not what Porphyry says—but perhaps it is what he meant to say.

(D6) **A genus is like matter, a difference like form.**
[15.6–7]

See 11.12–17.

³² See above, pp. 183–185.

§8: GENERA AND SPECIES

Porphyry enumerates three similarities. How many differences? Busse's punctuation suggests six: (A) 15.15–16; (B) 15.16–18; (C) 15.18–20; (D) 15.20–21; (E) 15.21–23; (F) 15.23–24. Points (E) and (F) are unambiguously demarcated in the Greek by the word 'again [*έτι*] at 15.21 and 23. Point (B) is also introduced, in the Greek, by 'again', at 15.16. But here Boethius writes '*enim* [for]'—and presumably read 'γάρ' in the Greek text he followed. Then the sentence which begins at 15.16 does not introduce a second difference—it explains the first. Boethius' commentaries make it clear that he took the explanation to continue until line 21, so that—on his analysis of the text—Porphyry mentions only three differences.¹

Boethius' interpretation is the best that can be done with his text; but it is forced. The sentence beginning at 15.16 does not furnish an explanation of its predecessor. On the other hand, it does furnish a point of difference between genera and species. We should therefore prefer the 'again' of the Greek manuscripts to the 'for' of Boethius.

Hence there are at least four features distinguishing genera from species. The Greek commentators find five (e.g. Elias, *in Isag* 97.23; [Elias], *in Isag* xviii 1); and they are probably right: (1) = (A); (2) = (B) + (C); (3)–(5) = (D)–(F). But it is a question of presentation rather than of substance.

(S1) Genera and species are predicated of a plurality of items. [15.10–11]

So 13.10.

Here Porphyry explicitly allows for species which are not lowest species; for he says that the species should 'be taken as a species and not also as a genus if the same item is both species and genus' (15.11–12).²

¹ See *in Isag*¹ 110.7–111.24; *in Isag*² 304.16–306.17.—Minio-Paluello's punctuation of Boethius' translation appears to distinguish six features, the first one and the last three corresponding to Busse's (A), (D), (E), and (F), the second being an amalgam of (B) and half (C), and the third being the remainder of (C). This goes against Boethius' commentaries.

² Boethius perversely takes this to mean that the comparison is between genera and lowest species (*in Isag*² 303.7–14).

‘Body’ and ‘animal’ are each predicated both generally and specially of men. If asked to compare a genus and a species—that is to say, a general predicate of X and a special predicate of X—you might think to take ‘body’ as the special predicate and ‘animal’ as the general one. Porphyry’s note is intended to exclude this: you must take the species as a species—that is to say, as a species of the genus with which it is being compared. You may compare body to animal as genus to species; but if you choose to take body as species, you cannot take animal as genus—for body is not a species of animal.

(S2) Genera and species are prior to their subjects. [15.12–13]

That is to say, genera are prior to their species (see 15.16–18), and both genera and species are prior to the individuals under them (17.8–10). On priority see 14.21–15.2. The point has raised some dust—which may be swept under a later carpet.³

(S3) Genera and species are wholes of a sort. [15.13]

So 8.1–3.

(D1) Genera extend further than their species, contain and are not contained by them. [15.15–16]

See 14.14–20⁴—and Aristotle:

A genus is always said wider than a species. (*Top* 121b3–4)

(D2) Genera pre-exist their species. [15.16–20]

Similarly, species pre-exist their properties (20.18–20—where the verb is ‘προϋφίστασθαι’ rather than ‘προϋποκείσθαι’), and genera pre-exist

³ See below, pp. 270–276.

⁴ For ‘περιέχειν’ see p. 114; for ‘ἐπι πλέον’, p. 143 n. 133.

the properties of their species (16.9-10—no verb). A similar point is made about species and accidents (21.12-15).⁵

It might be thought that ‘pre-existence’ is simply another name for priority—so, for example, it presumably is at Sextus, *M* X 269 (below, p. 363). But at 15.18—‘Hence genera are also prior by nature’—both the ‘hence’ and the ‘also’ suggest that priority is distinct from pre-existence and consequential upon it. Porphyry’s language suggests a causal and productive story: first, there exist bare genera; then, differences come along, stamp them, and produce species.⁶ The language also plays on the alleged parallel between genus and matter, difference and form (see 11.12-17): a genus ‘is there beforehand’ or underlies its differences, just as matter underlies form; and a genus is ‘shaped [*διαμορφοῦν*] by its differences just as matter is informed or shaped by its form.⁷

When Claus of Innsbruck cast a portrait bust, the bronze pre-existed the bust from which it was made; and so in all particular manufactures, the matter must be there first and then have the form set upon it. But it does not follow that, universally speaking, first there was formless matter and then the stuff was shaped. Indeed, there never was—for there cannot ever be—such a thing as ‘pure matter’, matter without

⁵ For ‘*προϋποκείσθαι*’ see e.g. in *Cat* 59.27; the verb is not in Aristotle (but ‘*προϋποτιθέναι*’ in a middle form at *Pol* 1325b38-39); rare in Alexander (in *Met* 86.8-10; *quaest* i 9 [20.12-14]); not in Plotinus, nor in Galen (in the pertinent sense), but common in Sextus—e.g. *PH* II 71; *M* X 208; also e.g. Clement, *strom* VIII ix 30.1. The word generally means something like ‘be there beforehand’; but in some passages the prefix ‘*προ-*’ has lost any semantic force: e.g. Sextus, *M* IX 204; X 268 (so too, perhaps, when the verb is used of matter: e.g. Iamblichus, *myst* III 1; Theophilus, *ad Autol* II 6).—For ‘*προϋφίστασθαι*’ see in *Cat* 111.9-10; in *Tim* frag 51.6-7 = Proclus, in *Tim* I 391.10-11 (paraphrase); again, not in Aristotle and rare in Alexander (e.g. in *Met* 121.22-25 [below, p. 297]; *an* 9.20-26); not in Plotinus nor in Galen but common enough in Sextus (e.g. *PH* III 26; *M* X 208); also e.g. Plutarch, *def orac* 427DE; Apollonius Dyscolus, *adv* 135.21-24.—Note also ‘*προϋπάρχειν*’: in *Cat* 142.14; common in Aristotle (e.g. *Cat* 7b24; *APr* 42b18-19; *Met* 1032b31; cf Bonitz, *Index* 654a61-b20) and in Alexander (e.g. in *APr* 286.11-12; in *Met* 22.8-9; 347.26-27); also in Plotinus (e.g. *enn* VI i 6.20-21), and in Sextus, and frequent in Galen.—The three verbs are synonyms: see e.g. Plutarch, *quaest conv* 636CD (Is the chicken before the egg?), where ‘*προϋφίστασθαι*’, ‘*προϋποκείσθαι*’, ‘*πρότερον εἶναι*’, and ‘*πρεσβύτερον εἶναι*’ are used promiscuously. The standard verb of contrast is ‘*ἐπιγίνεσθαι*’: e.g. 20.18-19; in *Cat* 111.9-10; 142.10 ≈ 14; Sextus, *PH* II 70; Alexander, in *Met* 121.22-25; 347.24-27.

⁶ For similar use of causal language see above, p. 166; for ‘*ἀποτελεῖν*’, above p. 180 n. 70.

⁷ See e.g. Boethius, *in Isag*¹ 110.17-25; David, *in Isag* 214.3-7.—For ‘*διαμορφοῦν*’ see e.g., in *Cat* 85.16-18; [Galen], *ad Gaur* vi 8; Plutarch, *an procr* 1023c; Ptolemy, *crit* viii 1; Arius Didymus, *Phys* frag 3 = Stobaeus, *ecl* I xii 1b; see Mansfeld, *Heresiography*, p. 113 n. 6.

form. And similarly, there never was—for there cannot ever be—such things as ‘pure genera’, genera without differences. Nor did Porphyry imagine that such absurdities were possible.

But if it is absurd to think that genera are chronologically prior to their species, then in what does their pre-existence consist? It ought, as 15.18 shows, to be something which underlies and explains natural priority. (The same point emerges from the parallel passages at 16.9–10 and 16–18.) In chapter 12 of the *Categories* Aristotle first distinguishes four sorts of priority, of which natural priority is the second. He then adds:

There would seem to be another mode of priority too, apart from those described. For of items which convert with respect to implication of existence, that which is in any way a cause of being to the other would reasonably be called naturally prior. (14b10–13)

That is to say, Fs and Gs might be simultaneous by the rules of priority, and yet F might count as prior—and as naturally prior—to G in virtue of some causal or explanatory precedence.

There is no reason why such causal priority should be limited to items which are simultaneous according to the rules of priority. In the *Metaphysics* Aristotle wants to show that, if everything is perceptible, then if there are no souls nothing at all exists:

For perception is not of itself; rather, there is something else, apart from perception, which necessarily is prior to the perception. For what moves is by nature prior to what is moved—even if these items are spoken of in relation to one another, nonetheless. (1010b35–1011a2)

The objects of perception are prior to perception not only inasmuch as they co-remove perception and are not co-removed by it, but also in the way in which a mover is prior to a moved item.

Now genera are causes, and causes of their species—they are formal causes, in the Aristotelian scheme of things (e.g. *Phys* 194b26–29). Why are llamas capable of perception? Well, llamas are animals and animals are capable of perception. It is the genus, animal, which explains some feature of the species, llama. So perhaps genera ‘pre-exist’ their species inasmuch as they are, in this way, causally prior to them. And insofar as they are causally prior, genera will also be naturally prior.

At 15.18–20 come two sentences, each introduced by ‘and’: ‘and they co-remove . . .’, ‘and if the species exist . . .’. In 15.16–20 we thus have the following sequence:

- (1) Genera pre-exist their species.
- (2) Hence they are prior to them.
- (3) And they co-remove without co-removing.
- (4) And if a species exists the genus exists but not *vice versa*.

What is the logical structure here? Perhaps (3) and (4) are two new points of difference between genera and species, on a level with (1)? Or perhaps (3) and (4) are twin parts of a new point of difference? Or perhaps (3) and (4) are twin parts of a single point which is subordinate to (1) and co-ordinate with (2)? The last interpretation was given by the ancient commentators. It is perhaps easiest from a linguistic point of view; and it gives the most appealing sense: (3) and (4) jointly invoke the rules of priority, and they thus explicate (2).

This interpretation of (D2) makes a distinction between pre-existence, in (1), and compliance with the rules of priority, in (3) + (4). It offers no way to distinguish priority from compliance with the rules of priority. Indeed, once pre-existence has been distinguished from priority, it is not easy to find a further distinction between priority and compliance with the rules; and it becomes even more attractive to take the rules to define natural priority.⁸

However that may be, the thesis that genera are 'prior by nature' to their species, implicit at 15.12-13, is here made explicit.⁹ It is explicit in Aristotle:

Genera are always prior to species; for they do not convert with respect to implication of existence—e.g. if there are aquatic items, there are animals, but if there are animals it is not necessary for there to be aquatic items. (*Cat* 15a4-7)

The point is repeated more than once in the *Topics* (e.g. 123a14-15; 141b25-29). It is taken up, as a matter of course, by every commentator on the *Categories*.¹⁰ Alexander says that it is a 'familiar' truth—so

⁸ See above, p. 251.

⁹ Ammonius reports Porphyry as holding that a genus is prior to the collection of its species (just as a genus is prior to the collection of its differences: 15.1-2). 'In the *Introduction* Porphyry has said that it is possible for a genus to exist if all its species are hypothetically removed—there he was talking about the intelligible genera and species, those which are "before the many" (*in Cat* 41.7-9). Perhaps this was Porphyry's view, as the parallel insinuates; but it is not present in the text (and the gloss on it is Ammonius' own).

¹⁰ See e.g. Boethius, *in Cat* 288D-289B (above, p. 249); Simplicius, *in Cat* 419.33-420.5—also, e.g. Boethius, *div* 879c; *in Cic Top* 1104B; scholia to Dionysius Thrax, *GG* I iii 120.18-19.—'Just as a species follows a genus, so a genus precedes a species' (Quintilian, VII i 59—below, p. 262 n. 1).

familiar that he does not bother to discuss it (*in Top* 320.21–23; cf e.g. *in Met* 105.7–8).¹¹

Had it ever been denied? Alexander wrote an essay—which survives only in Arabic paraphrase—entitled ‘Against Xenocrates’ view that the species are prior to the genera and anterior to them by natural priority’.¹² According to Xenocrates,

if the relation between a species and a genus is like the relation between a part and a whole, and if a part is anterior and prior to the whole by natural priority (for if a part is removed, the whole is removed inasmuch as no whole remains if one of its parts is lacking, whereas a part is not removed if the whole is removed, it being possible that certain parts of a whole are removed and others remain), then a species is likewise certainly prior to the genus. (Xenocrates, *frag* 121 = Alexander, *in Xenoc* p. 6)

Xenocrates, Aristotle’s older contemporary, thus used the rule of co-removal to determine priority; and he also deployed the parallel between genera and species and wholes and parts.

Alexander has no difficulty in refuting Xenocrates—as he puts it, genera are in some respects like wholes and in other respects not like them. In particular, they are not like them in matters of natural priority. The thesis on parts and wholes derives from Aristotle—for example, *Top* 150a33–36 (where it is supported by the rule of co-removal), or *Met* 1034b28.¹³ To be sure, Aristotle also says that, ‘in a way’, wholes are prior to their parts (*Met* 1035b18–25; *Pol* 1253a20–22—with the rule of co-removal); and there are echoes of this in the later literature (e.g. Plutarch, *quaest conv* 636f). Nonetheless, the view which Alexander ascribes to Xenocrates’ is evidently wrong.

So evidently that it might be wondered if Xenocrates held it. The text quoted or paraphrased by Alexander presents the view as the consequent of a conditional sentence with a conjunctive antecedent. The conditional sentence—as Alexander agrees—is true. Its consequent is false. Hence at least one of the conjuncts in the antecedent is false. Perhaps this is the inference which Xenocrates wanted to be drawn?

¹¹ Maioli, *Isagoge**, p. 146 n. 17 (cf. p. 150 n. 27) thinks that the point is ‘Platonic rather than Aristotelian’. To be sure, Aristotle also says that ‘of secondary substances, species are more substance than are genera’ (*Cat* 2b7–8); but whatever that may mean, it cannot be taken to contradict the trifling thesis that genera are naturally prior to species.

¹² English translation and discussion in Pines, ‘New fragment’; French translation in Badawi, *Transmission*, pp. 157–158.

¹³ ‘Every genus is naturally prior to its own species, whereas a whole is posterior to its parts’ (Boethius, *div* 879B).

(D3) Genera are predicated synonymously of their species, not vice versa. [15.20-21]

The remark, elaborated by Victorinus (*in rhet Cic I x* [187.6-16]), is over-egged. X is predicated ‘synonymously’ of Y if and only if both X and its definition are predicated of Y. Hence—despite a long tradition—if X is predicated of Y, then X is predicated synonymously of Y.¹⁴ Thus the adverb ‘synonymously’ is idle; and—so e.g. David, *in Isag* 215.5—(D3) repeats (D1).

(D4) Genera are more extensive than their species in one way, species more extensive than their genera in another. [15.21-23]

The second part is plain: species exceed ($\pi\lambda\epsilon\sigma\alpha\zeta\epsilon\nu$)¹⁵ their genera in virtue of their proper differences: that is to say (as 10.22-11.1 has explained) a species is a genus which is differentiated, a man is an animal which is rational. The first part seems to be a periphrastic way of saying that genera contain their species. This repeats (D1)—and makes a poor companion to the second part of (D4). The commentators prefer a different interpretation: a genus exceeds its species inasmuch as it possesses (potentially) all its differences.¹⁶ Man exceeds animal inasmuch as men possess actual rationality, animal potential rationality; and animal exceeds man inasmuch as animal possesses both potential rationality and potential non-rationality. This ingenious suggestion is hard to find in the text.

(D5) A species is never most general nor a genus most special. [15.23-24]

No genus is most special, since a genus is predicated of several items different in species. Boethius says that (D5) takes ‘species’ in the sense of ‘lowest species’ (*in Isag*¹ 112.17-20); but every species is ‘under’ a genus (above, pp. 97-98) and hence never most general.

¹⁴ See below, pp. 358-361; note also 16.6-7.

¹⁵ ‘ $\pi\lambda\epsilon\sigma\alpha\zeta\epsilon\nu$ ’ here is neutral in sense and synonymous with ‘ $\pi\epsilon\rho\sigma\sigma\epsilon\nu\epsilon\nu$ ’ at 10.22 (above, p. 187); cf. *in Cat* 124.30 (contrast *ibid* 59.7-8).

¹⁶ See David, *in Isag* 215.7; [Elias], *in Isag* xlvi 13.—For the noun ‘containing [$\pi\epsilon\rho\sigma\chi\eta$]’ see e.g. Sextus, *PH* III 101—it is rare before Porphyry but used some 20 times by him in various contexts.

§9: GENERA AND PROPERTIES

Three similarities, and five differences.

(S1) Genera and properties both follow their species. [16.2–3]

Aristotle not infrequently talks of one term's following another: Alexander explains that 'an item follows that of which it is predicated' (*in APr* 302.15–16), or, more precisely, that 'what follows is what is predicated of every' (*ibid* 295.16–17).¹ A genus follows a species, then, inasmuch as a general predicate is predicated of every special predicate in its family; and Porphyry's telegraphic 'If man, animal' is short for 'If anything is a man, it is an animal'.²

Some ancient critics took the plural 'their species' to imply that a property may hold of several species; they distinguished two sorts of property—those which, like 'mobile', are proper to a genus and hence are predicated of several species, and those which, like 'laughing', are proper to a lowest species; and they complained that Porphyry does not say which sort of property he had in mind. Now the plural 'species' does not carry the supposed implication; and even if it did, the objection would be frivolous. But David, for one, took it seriously, replying that it missed the mark insofar as properties are always properties of lowest species (*in Isag* 215.31–216.23).

Porphyry presents properties as predicates of species; and although he does not say that 'species' there means 'lowest species', he does affirm more than once that properties are predicated of a single species³—and that is false if there are properties of genera. (Any property of animal, say, will be predicated of man and of mouse and of every species of animal.) Again, all Porphyry's examples of properties are properties of lowest species. And so it is not implausible to infer, as David did, that

¹ For 'ἐπεσθαῖ' see 19.13; and e.g. Aristotle, *APr* 43b3, 7, 11–13 (= ἀκολουθεῖν: e.g. 26a2; 43b4); and e.g. Galen, *const art* I 254; Alexander, *in APr* 296.23; 302.15–16; 305.33–34.—But 'sequor' can mean 'be posterior to' (e.g. Quintilian, VII i 59: *ut genus species sequitur, ita speciem genus praecedit*); [Apuleius], *Ascl* iv.

² See above, p. 209.

³ 3.2–3 (cf 16–17); 16.11; and implicitly at 13.12–13; 19.11–13.

in Porphyry's view only lowest species have properties. This view can be found in Alexander, who affirms that 'properties and definitions are not said of several items differing in species' (*in Top* 295.9-10). Yet although the point may derive from certain remarks in the *Topics*,⁴ it is unAristotelian—and it goes against some of Porphyry's own remarks in *in Cat.* But then the same is true of the view, indisputably espoused in *Isag.*, that only species have properties.⁵

In any event, there may be—there surely are—predicates which belong to all and only the members of some genus: for example, 'having weight' of 'body'. If 'having weight' is not predicated properly of 'body', then what is its status? Evidently, it can only be an accident—an inseparable accident. That is unAristotelian; for Aristotelian accidents do not convert with their subjects. Did Porphyry nevertheless embrace the view and deliberately depart from Aristotle? It is hard to see why he should have done so. Moreover, at 22.8-9 he states that inseparable accidents do not convert: he probably means that none do; and he can hardly have thought that inseparable accidents do not convert but separable accidents do.

In short, when Porphyry says that properties are predicated of a single species, it is unlikely that he is self-consciously parading an unAristotelian doctrine. Rather, he is being careless. Properties are, trivially, predicated properly of a single species: Porphyry slides from this truism to the falsehood that properties are predicated of a single species.

(S2) Genera and properties are alike predicated equally of their subjects. [16.3-6]

The pertinent force of the adverb 'equally [$\epsilon\pi\iota\sigma\eta\varsigma$] is indicated at 17.6-8: items do not partake 'equally' in their accidents inasmuch as partaking in accidents 'admits augmentation and diminution'. So e.g. Sextus:

They are all equally perceptible—not one more so and the other less so. (*M VIII* 47)

⁴ See Alexander, *in Top* 392.29-31 ≈ Aristotle, *Top* 132b25-26; 403.8-9 ≈ 138a20.

⁵ See above, pp. 204-205.

And often.⁶ The same feature is said to be a common property of difference and species (18.11), of difference and property (19.5–7), and of species and property (20.14–15); it is denied to be a common property of genus and accident (17.6–8), difference and accident (20.3–5), species and accident (21.15–17), and property and accident (22.9–10). In other words, accidents alone of the five items admit degrees. This follows from what Porphyry says: he might have said it.

Porphyry had an argument to show that genera and species and differences are predicated equally.⁷ But although he repeats, three times, that properties are predicated equally (19.5–6; 20.14–15; 22.9–10), he offers no argument in support of the claim. Are not some men more given to laughter than others? Are not some horses better neighers than others? Aristotle explicitly notes that if X is a property of Y, then ‘more X’ is a property of ‘more Y’ (*Top* 137b14–27); and although this does not entail that properties may admit the more and the less, it suggests that Aristotle would have seen nothing against the notion. [Elias], in *Isag* li 33, observes that ‘properties are sometimes equal’—and he implies, though he gives no examples, that sometimes they are not.⁸

(S3) Genera and properties are predicated synonymously of their subjects. [16.6–7]

See 15.20–21.

According to David, some objected that properties, being accidents, are not predicated synonymously of their subjects. David replies that ‘those who say such things have never read Aristotle, who says clearly

⁶ See e.g. 18.11–12; 19.5–6; 20.14; 21.15–16; 22.9–10; cf in *Cat* 92.37; *quaest Hom Iliad* XIX 221 [237.1–2]; [Galen], *ad Gaur* iii 5. This use of the adverb (or adverbial phrase, if it is written ‘ἐπ’ ἵσης) is frequent from Herodotus onwards (VIII 50); and common to all philosophical parties (e.g. Chrysippus, *apud* Plutarch, *stoic rep* 1046cf; Alcinous, *didask* xxxiii [187.10]; Galen, *dign puls* VIII 868; Alexander, in *Met* 244.3; Plotinus, *enn* VI viii 9.11–20). For other uses of the adverb see below, p. 291.

⁷ See above, pp. 174–176.

⁸ At 16.3 I omit ‘ἀπόμενων’ with Boethius, the other ancient translations (Sgarbi, ‘Osservazioni’, p. 442), and some MSS.—At 16.4 ‘X participates in Y’ means no more than ‘Y is predicated of X’ (cf 17.6–8; 21.15; 22.9–10; see above, p. 138).—At 16.5 the choice of Anytus and Meletus, Socrates’ accusers, is perhaps pointed: even those dismal types were as fun-loving as Alcibiades. At any rate, the two accusers are not standard examples in the ancient texts (though Anytus appears in Ammonius: in *Int* 112.21, 34).

in the *Categories* that accidents too are predicated synonymously' (*in Isag* 216.25-29). Aristotle says the opposite.⁹

(D1) Genera are prior to properties. [16.9-10]

See 14.21-15.2. But Porphyry does not appeal to the rules of priority, which appear later in (D5); and his turn of expression suggests that he has in mind the 'pre-existence' or causal priority which he invoked at 15.16-18.¹⁰ Then (D1) can be urged as follows: genera pre-exist their species (15.15-18); species pre-exist their properties (20.18-20): hence genera pre-exist the properties of their species. The second premiss of this argument will be examined later.¹¹ That Porphyry has such an argument in mind is perhaps suggested by his curious reference to differences at 16.10.¹²

(D2) A genus is predicated of several species, a property of one. [16.10-11]¹³

For the dodgy second leg see above, pp. 262-263. Porphyry might have said, (D2*), that whereas a genus is predicated generically of several items, a property is predicated properly of only one item. Or he might have repeated that a genus is predicated of more items than a property (see 14.14-20).

⁹ See esp *Cat* 2a19-34: below, p. 360.—At 16.7 the plural, 'items of which it is a property', has caused difficulty (again at 19.6, 14; 20.15; 21.22): a property is a property of one item, not of several. But Porphyry is not imagining that neighing may be a property of the horse and also of the cow—it is a property of horses (in the plural).

¹⁰ So Boethius, *in Isag*² 310.16-18, refers to matter and form.

¹¹ See below, p. 293.

¹² Pedants will jib at the phrase 'divided by differences and properties': properties do not divide a genus.—Those who took 'mobile' to be a property of animal inferred that 'a genus does not necessarily precede a property' (David, *in Isag* 216.30-32). They then defend Porphyry against the objection. David rejects the defence—but his own is no better (*ibid* 216.32-217.7). There is no problem: genera are compared with the properties of their species.

¹³ A 'one/several' difference: see 15.4-6.

(D3) A property is counterpredicated of its subject, a genus is not counterpredicated of anything. [16.11–14]

Properties are again said to be counterpredicated at 19.14, 20.12, and 22.8 (the verb is ‘ἀντικατηγορεῖσθαι’¹⁴) Porphyry has already said, and will say again, that properties convert (‘ἀντιστρέφειν’: 7.4; 12.21; 19.14, 15). To say that properties convert is to say this:

(A) If X is properly predicated of Y, then X holds of everything of which Y holds and Y holds of everything of which X holds.¹⁵

‘X is counterpredicated of Y’ entails that Y is predicated of X; but it also entails that X is predicated of Y—you cannot be counter-accused unless you have already accused. So to say that properties are counterpredicated of their subjects is to say:

(B) If X is properly predicated of Y, then X is predicated of Y and Y is predicated of X.¹⁶

(A) and (B) are equivalent, if not synonymous; and the ancient commentators duly take ‘be counterpredicated’ to be synonymous with ‘convert’ (e.g. Arethas, in *Isag* 126.8). This fits Peripatetic usage: several texts in Aristotle and in Alexander show that they took ‘convert’ and ‘be counterpredicated’ to be interchangeable.¹⁷

Most of the *Introduction* is compatible with this interpretation; but one passage tells against it: at 19.14–15 Porphyry says that ‘properties are counterpredicated . . . inasmuch as they convert’; and the expression ‘inasmuch as’ is uncomfortable if counterpredication is the very same thing as conversion. The term ‘convert’ has other Peripatetic uses; and one of them might be invoked in order to distinguish counterpredication

¹⁴ Used by the orators to mean ‘counter-accuse’ (e.g. Lysias, vi 42; Isocrates, *panath* 22—defined by Fortunatianus, *ars rhet* i 12). In its logical use it is found in *Top* and *APst* (but not in *APr*); but outside those texts and commentaries upon them, it is very rare. (A quasi-logical occurrence at Dionysius of Halicarnassus, *Thuc* 24 [362.4]—synonymous with ‘ἀναστρέφειν’ at [361.22]).

¹⁵ For a more pedantic version see above, p. 210.

¹⁶ De Libera, *Isagoge**, pp. 64–66, nn. 125 and 137 (following Brunschwig, *Topiques*, p. 122 n. 1) suggests that: ‘A and B counterpredicate if and only if, for any concrete object x, if x is A then x is B and if x is B then x is A.’ This, the concrete apart, is a version of (B).

¹⁷ Clear examples in Aristotle, *APst* 73a16 (with reference to *APr* 58a13); 78a27–28; 82a15–16; Alexander, in *Top* 136.4–8 (cf in *APr* 223.29–30, where ‘ἀντιστρέφειν’ is equivalent to ‘ἀντακολούθειν’).

and conversion and thus restore harmony to 19.14-15.¹⁸ But any such invocation will carry a cost—it will introduce gross error. Perhaps it is best to side with the commentators, and to writhe silently over 19.14-15.

Properties are counterpredicated, genera are not. Aristotle says that genera are not counterpredicated (e.g. *APst* 83b9-10), clearly meaning that they are not counterpredicated of the species of which they are predicated (see e.g. *Top* 103b12-16). Porphyry says that they are counterpredicated of nothing at all. Presumably he means not that genera are counterpredicated of nothing whatsoever, but rather that they are counterpredicated of none of the other items in their family.

(D4) A property holds of all and only its species always; a genus holds of all the species always—but not only of the species. [16.14-16]

David, in *Isag* 217.17-20, says that this repeats (D3). For the ‘always’ see 18.13-14.

(D5) Properties do not co-remove genera, genera co-remove properties. [16.16-18]

So genera are prior to properties according to the rules of priority.¹⁹

Porphyry offers a brief argument for the second leg: ‘Genera co-remove that of which properties are properties: hence genera co-remove properties.’ Animal co-removes man: that is to say,

(1) It is inconceivable that there are no animals and there are some men;
or, more weakly:

(1*) Necessarily, if there are no animals, there are no men.

To reach his conclusion, Porphyry then needs:

(2) It is inconceivable that something be a man and not a laugher;
or at least:

(2*) It is necessary that if something is a man it laughs.

¹⁸ For Alexander’s view of the conversion of properties see above, pp. 210-211.

¹⁹ For the rules of priority see above, p. 248-251.—According to David, ‘this is the same as the first point’ (in *Isag* 217.25); but see above, p. 265.

(2) is evidently false. (2*) is Aristotelian. So it is best to let the argument rely on (1*) and (2*). In that case, priority here is not to be glossed in terms of conceivability. Further, Porphyry implicitly follows the Aristotelian notion that properties hold necessarily of their subjects.²⁰

Boethius' translation gives a different sense to the passage, and presupposes a different reading of the Greek: 'εἰδη' for 'γένη' in line 17, 'τὰ εἰδη' omitted in the same line, and no 'ῳστε' in line 18.²¹ This text offers not an argument but three consecutive claims: It is not the case that species co-remove genera. Properties co-remove species. Species co-remove properties. Together the claims establish the pertinent difference between genera and properties.

Boethius' text requires the same construal of priority and the same necessary link between properties and their subjects as the Greek text does. There is no powerful reason in favour of one text rather than the other.

²⁰ See below, p. 301.

²¹ Similar variants are presupposed by the Armenian translation: Sgarbi, 'Osservazioni', pp. 448–449.

§10: GENERA AND ACCIDENTS

Porphyry mentions a single similarity and four differences.

(S1) Genera and accidents are predicated of a plurality of items. [16.20–17.2]

See (as Porphyry says) 13.10. Being in motion is a separable accident (9.8 and notes), being black is inseparable (12.26–13.1—inanimate items which are inseparably black include coal and ebony: 22.7).¹

(D1) Genera are prior to their species, accidents posterior. [17.3–6²]

See 14.21–15.2.

That genera are prior to their species has already been announced (15.16–19). That accidents are posterior to their species will be repeated at 21.12–15. This latter claim will be discussed in its place. Here let it be remarked, first, that Porphyry does not appeal to the rules of priority, nor should he have done: raven does not co-remove black; for if there are no ravens, it does not follow that there is nothing black—a few pieces of anthracite and an Ethiopian may remain.³ Nor does causal priority⁴ help: it is not because they are ravens that these birds are black. Hence if (D1) is to work, there must be another notion of priority in play.

¹ Boethius' translation gives: 'black of ravens and men and Ethiopians [*et hominibus et Aethiopibus*] . . .'. Brandt emends to 'and Ethiopian men [*et hominibus Aethiopibus*] (see his note to *in Isag*² 313.5, where the MSS are a mess). He might have appealed to *in Isag*¹ 116.5: '*de homini Aethiopi nigrum*'—cf 123.22. But Boethius' gloss, 'as black is said of rational men [*ut nigrum dicitur de rationabili homini*]' (*in Isag*² 313.14), shows that the absurd reading should stand and that Boethius' Greek manuscript was corrupt.

² Busse's enumeration, which is a line out.—17.5–6 is cited by John Doxopatres, *in Herm stat* 309.15–17.

³ Ravens co-remove black ravens (see above, pp. 246–247); but that is hardly what Porphyry had in mind.

⁴ See above, p. 258.

**(D2) Genera do not admit of degrees, accidents do.
[17.6–8]**

See 16.3–6. Porphyry presumably means that some accidents admit the more and the less—at any rate, not all of them do. More generally, when Porphyry says of a pair of his pentad that As are so-and-so whereas Bs are not, the sense of his remark is often indeterminate: No Bs are so-and-so? or rather, Not all Bs are so-and-so?

(D3) Accidents subsist principally on individuals: genera and species are prior to individual substances. [17.8–10]

There are several puzzles here. First, Porphyry refers to species as well as to genera so that (D3) distinguishes species as well as genera from accidents. (The point is not taken up in § 15.) But this is a minor inelegance. Secondly, accidents are compared to individuals in general, genera to individual substances.⁵ Why substances? Perhaps there is an implicit argument *a fortiori*: genera are prior to individual substances; individual substances are prior to individual non-substances: hence genera are prior to individuals of any variety.⁶

Thirdly, the expression ‘subsist principally on’ is obscure. If (D3) is to be coherent, then there must be a contrast between ‘subsist principally’ and ‘be prior’ such that

If X subsists principally on Y, then X is not prior to Y.⁷

And the priority is natural (17.9), so that it should be governed by the rules of priority.

‘Subsist principally’ might be elucidated by reference to the thesis of 13.20: accidents are predicated principally of individuals. Now if acci-

⁵ De Libera, *Isagoge*^{*}, p. 66 n. 128, says that the ‘individual *οὐσίαι*’ here cannot be individual substances (such items are never predicated of anything, whereas here Porphyry is speaking, as usual, of predicates)—the individual *οὐσίαι* are individual essences. But Porphyry is not thinking of individual *οὐσίαι* as predicates (but as subjects for predicates); and in any event, he holds that individuals can be predicated (above, pp. 78–80).

⁶ The first two problems could be eliminated by deleting ‘καὶ τὰ εἴδη’ at 17.9 and ‘οὐσιῶν’ at 17.10; and I incline to think that the two expressions are glosses.

⁷ See Boethius, in *Isag*² 316.2–4, who offers the contrapositive: if accidents are principally in individuals, then they are posterior to individuals.

ents are predicated principally of individuals, of what are genera and species principally predicated? Lowest species raise a problem: are they predicated principally of individuals? (But then there is no contrast with accidents.) Of themselves? (But self-predication is scarcely considered in ancient texts.⁸) Of nothing? However that may be, genera are surely predicated principally of their species. But genera are prior to their species (15.18). Hence 'subsist principally' is not elucidated by 'be predicated principally'.

'Subsist principally' might, secondly, be glossed by reference to the thesis of 13.5: accidents are always subsistent in a subject. Black, say, always subsists in a subject; that is to say, if there is ever a black item, it is always a black so-and-so, a black X—where X itself is not an accident. There are black items insofar as there are, say, ravens, or ebony walking-sticks, which are black. It is not the case that there are ravens, or walking-sticks, insofar as there are ravenish or sticky black items. Moreover—since accidents are predicated principally of individuals—there are black items insofar as this or that individual subject is black, insofar as Roderick or Rebecca is black.

Being subsistent in individuals, accidents are dependent upon them—and posterior to them. Were individuals removed, accidents would go with them, but not *vice versa*. Roderick and Rebecca may exist even if there is nothing black. But if there is something black, then Roderick or Rebecca—or some such individual—must exist. All that is pretty fragile. Moreover, it does not seem to ground a dissimilarity between accidents on the one hand and genera and species on the other; for surely if there is some cat, then Cornelius or Ratty—or some such individual—must exist. In any event, before going any further with accidents it will be well to turn to the other leg of (D₃).

For if the problems about accidents are vexing, commentators have been far more exercised by Porphyry's statement that genera and species are prior to individuals. Elsewhere Porphyry apparently says precisely the opposite:

Individual substances are said to be most especially and primary substances; for everything else is either said of them as subjects (I mean their own species and genera) or is in them as subjects (I mean the other nine accidents). Hence if the primary substances did not exist, none of the other items would hold. (*in Cat* 89.13-17)

⁸ See above, p. 80.

This is a close paraphrase of Aristotle⁹—and what piece of Aristotle's metaphysics is better known than the doctrine that individuals are the primary substances?

Cornelius and Diggory, this cat and that duck, are primary entities. The species cat and the species duck are indeed substances; but they are secondary substances, and posterior to the individuals. The genus animal is a substance—but it too is secondary, posterior even to its species. This was the view of Alexander, who

urges that here and in nature universals are posterior to singulars—though he hardly offers a proof, and he begs the question when he says that common items take their existence and their substance from singulars. (Simplicius, *in Cat* 82.22–25; cf Dexippus, *in Cat* 45.12–31)

Or again:

Alexander of Aphrodisias tries to establish that individual substances are prior by nature to everything. That they co-remove, Aristotle himself showed. That they are not co-removed he demonstrates as follows: Look, he says, if the universal sun were removed, it would not remove the sun. (Elias, *in Cat* 166.35–167.2)

This Aristotelian doctrine which makes genera and species posterior to individuals is apparently accepted by Porphyry in *in Cat*—and rejected by him in *Isag*.

In *in Cat* Porphyry is engaged in the exegesis of Aristotle; so surely *Isag* represents his true conviction. And in repudiating the Aristotelian doctrine, he is following his master Plotinus, who says that

what is more general is prior by nature; hence the species is prior to the individual. (*enn VI* iii 9.36–37)

Thus at 17.8–10 Porphyry is insinuating a piece of Platonic metaphysics into his Peripatetic text.¹⁰

Well, if natural priority is determined by the rules of priority, then the doctrine which Porphyry insinuates is a true doctrine; for by those

⁹ 'All other things are either said of primary substances as of subjects or are in them as in subjects. So if the primary substances do not exist, it is impossible for anything else to exist' (*Cat* 2b3–5).

¹⁰ So e.g. Maioli, *Isagoge**, pp. 37–38; Girgenti, *Isagoge**, pp. 19–20 ('Porphyry ascribes to Aristotle the Plotinian affirmation of the ontological priority of genera and species to individuals'—this being one of the ways in which he seeks to marry Plato and Aristotle); cf pp. 28–29 (citing *enn VI* iii 9.36–37); p. 183 n. 79 ('This assertion, which explicitly identifies genera and species with universal essences, i.e. with the Ideas, is squarely Platonic and Aristotle would not have accepted it').

rules genera and species are prior to the individuals under them. Cat co-removes individual cats: it is inconceivable that there are no cats and yet this cat or that cat exists. Individual cats do not co-remove cat: it is conceivable that this cat or that cat does not exist and yet there are cats.¹¹

Moreover, the 'Platonic' doctrine which Porphyry slips into the *Introduction* is not only true—it is also Peripatetic. It was embraced by Alexander without a shudder:

If one of the items under the common item is removed, the common item is not co-removed, since it is found in several items. But if the common item were removed, then none of the items under the common item, the existence of which depends on their possessing it, would exist. (*quaest i 11a* [22.17–20]; cf 11b [23.11–13])

And Alexander thought he took the doctrine from Aristotle:

We have learned from the *Categories* that prior by nature are those items which do not convert according to implication of being with those items which, being posited, they themselves follow. Such are genera. For every genus is prior by nature to each of the species under it; for if the species is posited, it is absolutely necessary that the genus follow—but not the species the genus. And species are similarly related to the items of which they are species—they are prior by nature to them. (*in APr 6.34–7.5*)

Alexander thus endorses the priority of genera and species over their individuals. He apparently takes it to be uncontroversial, and Aristotelian.

But then does Alexander not contradict himself in maintaining the primacy of the individual? How can he maintain both the commonplace truth that cats are prior to Cornelius and also the fundamental Aristotelian tenet that Cornelius is prior to cats? Porphyry confronts the question in his commentary on the *Categories*:

But if it is because of removing and not being co-removed that you say that the primary substances are primary and especially so and most properly so, how can it be that for this reason individual substances are primary substances? If man, which is predicated in common, is removed in thought, then so too is Socrates, who was supposed to be the individual and primary substance—and similarly,

¹¹ The doctrine holds that genera and species are prior to the individuals under them—not to all and every individual. Thus ducks are prior to this duck and to that duck—but not to this or that cat.—To be precise, the rules of priority need to be extended in order to cover the present type of case; for they were formulated for general terms ('Fs are prior to Gs') and not for singular terms ('this F'). But the necessary extension is evident ('Fs are prior to a'); and indeed it is only contemporary sensibilities which require it (above, pp. 74–76).

if animal is removed notionally then man and Socrates no longer exist.¹² Then why is man not prior to Socrates if when it is removed it co-removes but it is not co-removed when he is removed? For if Socrates does not exist, men exist; but if men do not exist, Socrates does not exist. Similarly with animal: if animals exist then Socrates can exist, but if animals are wholly removed, Socrates will not exist.

Now what is concluded from this? If those items are primary which co-remove and are not co-removed, and if animal and man co-remove Socrates and are not co-removed together with Socrates, then it is not Socrates but the genera and species which will be primary substances. What will you say to this puzzle?

—I say that you have not proceeded correctly.

—How so?

—Because you have based the argument on Socrates alone (and if he is removed, man and animal remain): you must not base the argument on a single item but recognize that it is not one of the particulars which is individual substance but rather all the singular men from whom man as commonly predicated was conceived and the singular animals because of which we conceived animal as commonly predicated. It is they which are responsible for the being of the items which are predicated in common; for apart from the singulars it is not possible to think of a cow or a man or a horse or in general an animal. But if it is from perception of the singulars that we arrive at the common thought, which we no longer think of as a this but as a such-and-such, then if the singular animals are removed, the animal which is predicated of them in common will no longer exist either. (*in Cat* 90.12–91.5)

To be sure—Porphyry concedes—man is prior to Socrates and cat to Cornelius. But Aristotle's doctrine of the primacy of individuals does not deny those truths; for the primacy of individuals resides in them not individually but collectively.

At first glance, Porphyry might appear to suggest that, although a species is prior to each single individual which falls under it, nonetheless the collection of all the individuals is prior to the species. But the collection is not prior. On the one hand, cat co-removes not only Cornelius but every individual cat—and hence every collection or litter of cats: it is impossible or inconceivable that there are no cats and yet this cat or that cat or . . . exists. On the other hand, no collection of individual cats co-removes cat; for it is conceivable that this cat and that cat and . . . do not exist and yet there are cats. By the rules of priority cat is prior not only to any individual cat but also to any collection of cats, however numerous.

¹² The text at 90.14–17 is uncertain, but not the general sense.

In any event, Porphyry does not appeal to the collection of all the individual cats there are. Rather, he appeals to the collection of those individual cats from whom the general concept of cat was taken.¹³ According to a familiar story, it is by perceiving individual cats that we come to form the concept of a cat (and then it is by forming the concepts of cats and other lowest species that we form the concept of an animal, and so on upwards and upwards). Porphyry suggests that it is these individual cats who are prior to the species: primacy lies not with Cornelius, nor yet with the set of all cats, but with a privileged litter—the litter responsible for the formation of the concept of cat in general.

But, again, the privileged litter is not prior to cat. On the contrary—and for reasons already rehearsed—cat is prior to the litter. Moreover, Porphyry's argument establishes, at most, that there must exist a few individual cats if anyone is ever to think of cats in general. More precisely, it establishes—at most—that individual cats are prior to the concept of cat inasmuch as if there are no individual cats then no-one can possibly have the concept of cat, whereas there might be—and no doubt once were—individual cats without anyone having any concept of cat. And that has nothing to do with the thesis that individuals are prior to their species and genera. As Plotinus remarks,

the more general is prior by nature, so that the species is prior to the individual. What is prior by nature is prior simply—so how could it be inferior? 'But singulars, being more knowable in relation to us, are prior'. That does not mark any difference in the objects themselves. (*enn* VI iii 9.36–40)

Despite what he appears to say, Porphyry must have agreed with Plotinus. His claim is not that some group of individuals is naturally prior to the species: rather, it is that individuals are prior in another and non-natural way to the species. As a late text puts it,

by nature genera are prior to species and species to singulars (e.g. the universal man to particular men); but in relation to us, singulars are anterior to species and species to genera. (*scholia to Dionysius Thrax, GG* I iii 120.5–8)

They are prior in relation to us inasmuch as, in order to think of animal in general, you must first have thought of cats and ducks and mice and . . . ; and in order to think of cats in general you must first have thought of (or have perceived) Cornelius or Ratty or some other cat.

¹³ i.e. 'all the singular men from whom . . .' at 90.32 means 'all those individuals from whom . . .' and not 'all the individuals, from whom . . .'.

This doctrine finds its origins in the last chapter of the *Posterior Analytics*, and it represents one Peripatetic thesis on the priority of individuals.¹⁴ But it is not the doctrine which Aristotle advances in the *Categories*; and although appeal to it removes the apparent contradiction between *in Cat* and *Isag*, it does not advance the interpretation of 17.8–10. For it does not establish any asymmetry between genera and species on the one hand and accidents on the other. Black, say, is posterior to individual black items in just the way in which cat is posterior to individual cats: we come to conceive of black by perceiving this or that individual black item.

But there seems to be an asymmetry between species and accidents which may be relevant. Just as a cat is essentially an animal of such and such a sort, so this cat is essentially a cat. On the other hand, black being an accident of ravens, this black raven is not essentially black. Let us now invoke the rules of priority in version (B).

(1) Necessarily, if there are no cats, then this cat does not exist;

and also:

(2) It is not necessary that if this cat does not exist, then there are no cats.

Similarly, black will be prior to this individual black item if:

(1*) Necessarily, if there are no black items, then this black item does not exist;

and also:

(2*) It is not necessary that if this black item does not exist, then there are no black items.

Now (2*) is doubtless true. But (1*) is false; for this black item might exist in the absence of all blackness—by dint of having another colour. This cat, on the other hand, cannot persist in the absence of cats—for a cat cannot change its felinity.

This establishes a pertinent distinction between genera and accidents (and between species and accidents) in their respective relation to the individuals which fall under them; and it does so in terms of the familiar rules of priority. But I cannot pretend that it is readily found in Porphyry's text.

¹⁴ See also e.g. *APst* 71b33–72a5; *Phys* 184a16–19—suggesting that species are prior to genera ‘relative to us’.

(D4) **Genera are predicated in answer to ‘What is it?’, accidents to ‘What sort?’ or ‘What like?’. [17.10–13]**

See 15.2–4.¹⁵

Four of the promised comparisons among the five items have been made: six remain. [17.14–18.9]

‘We have now dealt with the differences between genera and the other four items.’ Or rather, with similarities and differences. ‘Each of the five items is to be compared with each of the other four; hence there are 5×4 or 20 comparisons to make’. Or rather, not so. ‘Each successive set of comparisons has one item fewer: we shall next look at differences; but differences and genera have already been compared, so there will be only four comparisons to make. Hence the total number of comparisons is $4 + 3 + 2 + 1 = 10$. Four down, and six to go.’¹⁶ Porphyry should have noted that when we reach accidents, all comparisons have already been made: the correct sum is $4 + 3 + 2 + 1 + 0 = 10$.¹⁷

Porphyry does the calculation for five items—how might it go for six, or for seven, or for any number? The ancient commentators go to town.¹⁸

If we want to know, of any terms of whatever sort, how many kinds of combination with one another they allow, we should use the following method: we should take the number one less and multiply it by the original number, and then divide the result by two. (Ammonius, *in Isag* 115.20–24)

¹⁵ De Libera, *Isagoge**, p. 66 n. 130, finds here the ‘complete justification’ for his view that Porphyry had a system of three questions (see above, p. 91).—Two textual trifles: at 17.11, ‘ποιὸν τι’ and ‘ἔχον’ or ‘ποιὸν τι ἔστι’ and ‘ἔχει’? No difference in sense, and no rational way to decide the matter. At 17.12 perhaps add ‘ὅτι’ with the Aldine and the Armenian translation (Sgarbi, ‘Osservazioni’, pp. 451–452): cf 11.11.

¹⁶ Cf 20.8–10—species—genus and species—difference comparisons have already been done; 21.18–19—properties have already been compared with genera, differences, and species.

¹⁷ So e.g. Ammonius, *in Isag* 124.3–4; Boethius, *in Isag*² 323.4–9; 347.16–20.

¹⁸ Boethius discusses the passage for some five pages (*in Isag*² 319.15–325.7). Elsewhere he rehearses a comparable calculation (*in Cat* 272CD); so too, for example, does Simplicius (*in Cat* 45.8–18; 397.31–398.12).

The number of pairings of n items is $n/2 \times (n - 1)$.¹⁹ (It is assumed that no item pairs with itself.)

A few points of detail may be shovelled into a footnote.²⁰

¹⁹ Cf Ammonius, in *Isag* 122.22–124.8, where he adds two further methods of doing the calculation; Elias, in *Isag* 99.19–100.25; [Elias], in *Isag* 1.3 (who explicitly ascribes the general rule to Porphyry); Boethius, in *Isag²* 324.11–19. Boethius gives the rule, acknowledges that he has stated it without proof, and promises a proof in his account of the categories (in *Isag²* 325.4–7). At in *Cat* 272CD there is nothing which could be called a proof: is Boethius advertiring to a second commentary on *Cat* which either was never finished or else went missing? (See above, p. xx n. 47.)

²⁰ (i) At 17.15 and 16 Boethius twice has ‘the other four [*aliis quattuor*]’ where the Greek MSS have ‘the four’. The article before ‘τεττάρων’ invites the addition of ‘ἀλλων’ to the Greek text. (ii) At 17.17 the Greek MSS have ‘But it is not so; rather . . .’: there is nothing corresponding to ‘But it is not so [ἀλλ’ οὐχ οὐτως ἔχει]’ in Boethius’ translation, nor in the other ancient translations (Sgarbi, ‘Osservazioni’, p. 453), nor in one of the earliest of the Greek manuscripts. (But the same clause is found at 6.4–5.) Was the phrase dropped by a careless copyist or added by a pedantic reader? Perhaps the latter. (iii) At 17.17–18 the phrase ‘ἀεὶ τῶν ἐφεξῆς καταριθμούμενων’ is opaque. Does ‘ἐφεξῆς’ mean ‘successive’ or rather ‘sequential’? Does ‘ἀεὶ’ refer to successive items in a sequence or generalize over sequences? Several interpretations are open, of which the following two are the least unpromising: (a) ‘In every case where sequential items are counted . . .’; (b) ‘When at each stage the successor is counted . . .’. Version (a) makes the ‘*καλ*’ after ‘καταριθμούμενων’ difficult; version (b) makes the article before ‘ἐφεξῆς’ difficult. (iv) In 17.18–19 the Greek MSS offer nonsensical cardinals: ‘two . . . three . . . four . . . five’. Boethius’ translation has ordinals throughout, and the text he presupposes is correct. (One Greek manuscript has ‘secondly [δεύτεροι]’ for ‘two’ (in *Isag* 129.6).) (v) At 17.23 the Greek has ‘λοιπὸν δέ’, Boethius ‘relinquit igitur’: change ‘δέ’ to ‘δή’? (So Busse, in his apparatus criticus, and Tricot, *Isagogē**, p. 42 n. 1.) Or to ‘οὖν’? Note the perfect parallel in ‘λοιπὸν οὖν’ at 18.1–2; and cf 13.6. (vi) Finally, the ‘*καλ*’ before ‘αὐταῖ’ at 18.2–3 is odd (and untranslatable): delete.

§ I I : DIFFERENCES AND SPECIES

Two similarities, four differences.

(S1) Differences and species both hold equally of their subjects. [18.11–13]

See 16.3–6.

(S2) Differences and species are always present in their subjects. [18.13–14]

The same point is noted of differences and properties (19.7), of differences and inseparable accidents (19.18–19) and of properties and inseparable accidents (22.2).¹

The word ‘presence [*παρουσία*]’ is familiar from Plato,² and it has been saluted as a technical term in Porphyrean metaphysics—though what its technical sense might be is left in decent obscurity.³ However that may be, there is nothing technical about it here: a predicate is ‘present in’ an item if it is true of the item; and ‘*παρεῖναι*’ is synonymous with ‘*προσεῖναι*’—as 22.5–7 demonstrates.⁴ Boethius translates both verbs by the same Latin word: ‘*adesse*’. I use ‘be present in’ for ‘*παρεῖναι*’, ‘be present to’ for ‘*προσεῖναι*’.

But there is a metaphysical point in the wings. If X ever holds specifically or differentially of a, then it always holds of a (and presumably always holds specifically or differentially of a).⁵ If ‘man’ ever held of Porphyry, then it always held of Porphyry. Porphyry could not have become a crocodile or a lapwing. As Ammonius notes, what is necessary

¹ See also 16.14–16; 20.20–22 and notes.

² See esp *Pho* 100D; *Soph* 247A; but the word is also Aristotelian—e.g. *APr* 44a2–5 (see Bonitz, *Index* 568a10–11); cf Alexander, *mant* 106.20–21; 124.25–27.

³ See Dörrie, *Symmikta Zetemata*, pp. 72–73 (with reference to *Symm Zet* 260 = Nemesius, *nat hom* 43.3–8).

⁴ ‘*παρεῖναι*’: 18.13; 19.7; 20.14, 20; 22.2, 5. ‘*προσεῖναι*’: 19.18, 19; 21.3; 22.7 (cf 13.7); also e.g. in *Ptol harm* 59.24; 60.29; and Plato, *Phdr* 247D; *Parm* 144C (where it means the same as ‘*παρεῖναι*’ at 144D).

⁵ With a caveat for mutilation: see 19.7–9.

simply and strictly so-called is that which always holds of the subject which is not capable of subsisting apart from it, 'always' being taken either for infinite time, as in the case of eternal items—e.g. when we say that by necessity the sun moves or the angles of a triangle are equal to two right angles—or while the subject exists, as when we say that of necessity this fire is hot or Socrates is an animal. (*in Int* 153.14–19)

A thesis of this sort is common enough in philosophy. Why was it accepted by Porphyry?

The question has a certain piquancy. Ancient Platonists believed in the transmigration of souls, and most of them believed that the soul of their grand-dam might haply inhabit a bird. Metempsychosis across species implies that one and the same individual may belong, at different periods of its existence, to different species. Porphyry's own view on transmigration is unclear, but it seems probable that he rejected cross-species change.⁶ In any event, he ought to have done so in the light of the logical doctrine which he here affirms.⁷

(D1) Differential predicates say what sort of thing an item is, special predicates say what it is. [18.16–19]

See 15.2–4; and for the semi-causal language ('approach', 'give subsistence to')⁸ see above, p. 180.

⁶ Porphyry seems to accept animal reincarnation in frag 382 = Stobaeus, *eccl* I xlix 60 (but the ascription of this text to Porphyry has been questioned: see Smith, 'Studies', p. 726 n. 48). On the other hand, it is expressly rejected at *reg. anim.* 300 = Augustine, *CD* X 30 ('Porphyry thinks that human souls can fall only into human bodies'), and in frag 448 = Aeneas of Gaza, *Theophr.* 893AB. See Smith, 'Transmigration'; 'Studies', pp. 723–727.

⁷ It will not do to reply that Porphyry thought himself to be a soul, not a man. No doubt he did think that he was a soul—such, after all, was the message of the *Phaedo* and the doctrine of the *First Alcibiades*. But the doctrine does not entail that Porphyry is not a man. On the contrary, the doctrine teaches that men are souls: the question at *Alc* I 120A is 'What am I?'; the answer is 'A soul'; and the end of the argument asks: 'Do you need any clearer proof that a man [*ἀνθρωπός*] is a soul?' (130c). So too Plotinus (e.g. *enn* IV vii 1.22–25)—and the thesis was, I suppose, accepted in all quarters (e.g. Aristotle, *EN* 1178a2–7; Epiphanius, *pan* III ii 9 [III 508.25–26], on Cleanthes) save among the Epicureans (see Lucretius, III 843–846; Sextus, *PH* III 229).

⁸ With 'ὑπέστησαν αὐτό' at 18.18–19 (where 'αὐτό' presumably refers to the species) compare 'εἰς ὑπόστασιν' at 19.1. (Boethius there has 'in substantia', which presumably should be corrected to 'in substantiam'.)

There is a curious qualification: 'For even if man is taken as a sort of thing [*ποιόν*], he will not be a sort of thing simply . . .'. Ammonius explains that 'A man' is an acceptable answer to the question: 'What sort of animal is it?' (*in Isag* 124.18-125.7). When I say 'Porphyry is a man' I give an appropriate answer to the question: 'What is he?'; but the remark is also appropriate as an answer to the question 'What sort of thing—or perhaps, what sort of animal—is Porphyry?'. How so? It is appropriate, Porphyry suggests, insofar as 'man' means 'rational animal'; in other words, insofar as 'He's a man' contains 'He's rational'—which is the most appropriate answer to the question: 'What sort of animal is he?'.⁹

Why should Porphyry have made the point? It is tempting to recall a Stoic thesis:

An appellative, according to Diogenes <of Babylon>, is a part of speech which signifies a common quality—e.g. man, horse; a name is a part of speech which indicates a proper quality—e.g. Diogenes, Socrates. (Diogenes Laertius, VII 58)

Even if you take the Stoic view of species terms and you think that they signify qualities (*ποιοτήτες*) and you infer that they give appropriate answers to 'What sort [*ποιόν*]?', even so you must allow that they answer the question 'What is it?'.

But it is perhaps more plausible to think that Porphyry has his eye on a passage in Aristotle, which his words seem to echo:¹⁰

Every substance is thought to signify a this such-and-such. Now in the case of primary substances it is indisputable and true that each signifies a this such-and-such—for what is indicated is individual and numerically one. But in the case of secondary substances it appears, by the form of expression, that you similarly signify a this such-and-such when you say man or animal. But this is not true—rather, you signify a sort of thing (*ποιόν*). For the underlying item is not one thing, as in the case of primary substances: rather, man is said of several things, and so is animal. But they do not signify a sort of thing simply, as white does; for white signifies nothing except a sort of thing, whereas a species and a genus determine the sort about a substance—for they signify a sort of substance. (*Cat* 3b10-21)

The passage is not easy; but the gist is plain. A term like 'man' does not designate a this such-and-such, since it does not designate an individual—and it does not designate an individual since it is true of a plurality of items. It signifies a sort of thing (*ποιόν*); but not a sort of thing simply.¹⁰

⁹ So de Libera, *Isagoge**, p. 67 n. 133.

¹⁰ Cf Trophonius, *proleg* 2.10-14: you may say what something is either by giving its 'name' (i.e. the genus name) or by offering a definition—and in the latter case your answer will include an answer to 'What sort of so-and-so is it?' since the definition includes the differences. At *ibid*, 8.16-22, this view is ascribed to Aristotle, *Top*, and to Porphyry, *Isag*.

Perhaps Porphyry felt that Aristotle's claim that 'man' designates a sort of thing might suggest that 'A man' was an appropriate answer to 'What sort?' rather than to 'What?'. Indeed, Aristotle's remark might be thought to efface the distinction between differences on the one hand and genera and species on the other.

You might ask how quality as difference differs from quality as genus and species (for of these too he said, in the *Categories*, that they determine the sort about a substance); and if these are qualities in the same way as differences are, why did he not mention them here? Again, if they determine the sort in a substance, how will they be predicated in answer to 'What is it?', which is included in their definitions? Or are differences predicated in answer not to 'What is it?' but to 'What sort of so-and-so?'? (Alexander, *in Met* 399.6–12)

Porphyry perhaps wanted to explain why 'Man' is an appropriate answer to 'What is it?' even though 'man' signifies 'a sort of thing'. But Aristotle's text does not evidently raise the issue, nor does Porphyry himself advert to it when he comments on the text at *in Cat* 96.14–28.¹¹

(D2) Differences often hold of items in different species, species hold of items in a single species. [18.19–21]

For the point about differences—here specified as holding 'often'—see above, pp. 191–193. The point about species is true if and only if they are lowest species. See also 19.11–13, on differences and properties.

(D3) Differences are prior to species. [18.21–23]¹²

See 14.21–15.2.

A difference which is constitutive of a species is naturally prior to the species which it constitutes. The point is explicit in Aristotle:

A difference must be posterior to the genus and prior to the species. (*Top* 144b9–11)

¹¹ Elsewhere Aristotle says that a term like 'animal' signifies not $\piοιον$ but $\tauοιονδε$: e.g. *Met* 1039b1–2, 15–16.

¹² Boethius (despite his translation) runs (2) and (3) together and makes a single point out of them: *in Isag*² 328.13–329.5.—For gods and angels (18.23) see above, p. 198 n. 117.

The rules of priority apply:¹³ it is impossible, and inconceivable, that there should be no rational items and yet some men; it is possible, or at least conceivable, that there should be no men and yet some rational items (gods, for example, or parrots).

(D4) Differences can be compounded, species cannot.
[18.23-19.3]

There is nothing else in *Isag* comparable to this remark, 20.5-6 being only speciously similar.

Two predicates are compounded if their conjunction is true of something. Do any two differential predicates thus compound? No: 'rational' and 'non-rational' do not. Do the members of every conjugation of differences compound? (For conjugations see above, p. 183.) Surely not. Porphyry presumably means that some differential predicates compound—for example, 'mortal' and 'rational' compound inasmuch as 'mortal and rational' is a differential predicate.¹⁴ On the other hand, if X and X* are special predicates, then the conjunctive predicate 'X and X*' is not a special predicate.¹⁵

'Horse and donkey', for example, is not a special predicate, and in fact is true of nothing. If X and X* are co-ordinate special predicates (as they are in this case), then nothing can fall under their conjunction; and if (D4) is limited to lowest species, then all conjunctions will join co-ordinate species. But what if the conjoined species are not co-ordinate? Some conjunctions exclude themselves ('rational animal and bird'); others do not. What, say, of 'animal and man'? It is not true that nothing falls under this predicate—which is true of all and only men. Perhaps the thing is not a predicate at all, or not a special predicate, or not a new special predicate (the conjunctive predicate being nothing more than a redundant form of the special predicate 'man')?

A note on mules.¹⁶ Porphyry has a Platonic text in mind; for Plato remarks, in connection with division, that 'the genus of horses and asses

¹³ See above, pp. 248-251.

¹⁴ Boethius, in *Isag*¹ 121.13-18 and in *Isag*² 329.5-8, supposes Porphyry to mean that differences combine to form a species (see Elias, in *Isag* 101.26-28).

¹⁵ Porphyry may have his eye on Aristotle, who notices that 'from several numbers one number is produced; but how can one *εἶδος* come from several *εἶδη*?' (*Met* 991b21-22). But Aristotle is speaking of Platonic Forms rather than of species (see Alexander, in *Met* 110.5-24).

¹⁶ See also in *Ptol harm* 67.6-8: the term '*ἡμίουνος*' is used catachrestically—since a mule is not literally half an ass.

can naturally reproduce from one another' (*Plt* 265DE). And Porphyry wants to ward off a possible misunderstanding: it is not the genera—that is to say, the species—which combine; rather, individuals mate (see Boethius, *in Isag*¹ 121.19–22; *in Isag*² 329.10–11). That point apart, do mules form a species or are they unhappy accidents? Aristotle sometimes speaks of the genus or the species of mules (*GA* 746b20–21; 747a25–26; 748a1–7). On the other hand, *Met* 1033b33–1034a2 suggests that 'mule' is not a species term: mules belong to the nameless genus common to horse and ass, but they belong to no species. This has the curious consequence that there are members of a genus which do not belong to any of its subordinate species.

§12: DIFFERENCES AND PROPERTIES

Two common features—the same two noted for differences and species at 18.11–14—and two differences.

(S1) Differences and properties hold equally of their subjects. [19.5–7]

See 16.3–6.

(S2) Differences and properties alike hold always and of all their subjects. [19.7–9]

See 18.13–14.

But suppose a man lacks or loses a leg¹—then he is not, or is no longer, biped. Thus biped is a difference of man and yet does not hold always of every man. (So too, it might be urged, with properties: a man might lack or lose the capacity to laugh.) But this is preposterous: as Alexander observes, ‘what is mutilated must preserve the same substance and the same form’ (*in Met* 427.4–5, on *Met* 1024a14–15); and if a man can lose a leg, then ‘biped’ is not predicated differentially of man.

Such, in effect, is Porphyry’s view. Being biped is a difference of man inasmuch as men are naturally biped, even if they do not always show both legs. In other words, if the predicate ‘biped’ holds differentially of men, then it means not ‘possessing two legs’ but ‘being of a nature such as to possess two legs’—and hence, despite deformity and mutilation, it holds always and of every man. This is from the *Topics*:

If you do not add ‘by nature’ you go wrong; for it is possible for what holds by nature not to hold of that of which it holds by nature—e.g. being biped of man. (134b5–7)

¹ The word ‘κολοβός’ is generally applied to mutilations or breakages (see esp Aristotle, *Met* 1024a11–28), but also to congenital deformities (e.g. Aristotle, *HA* 48b23–24, of the deformed feet of the seal). Porphyry’s argument indicates that he is thinking of mutilation. But deformity is equally pertinent, bearing on the ‘every’ rather than upon the ‘always’; and Boethius expressly notes both types of case (*in Isag*² 331.7–8).

'Men are biped' is true only if you understand 'biped' to mean 'biped by nature'.

The point recalls 12.17–20: laughing is a property of men inasmuch as men are naturally capable of laughing—even if they do not laugh all the time. But there are two distinctions to be kept distinct: the distinction between being actually so-and-so and being potentially so-and-so; and the distinction between being so-and-so (whether actually or potentially) and being of a nature such as to be so-and-so. In 12.17–20, the former distinction is what matters; at 19.7–9 the latter.

The issue is not trifling. The sublunary world exhibits regularity but not universal conformity: things happen here, as Aristotle never tires of saying, 'for the most part'. By nature, men go grey. But not always—various mishaps or interventions may skew the natural development of things. This is true even of features closely attached to their subjects—indeed even (and paradoxically) of features which are essential to their subjects.

One way of understanding Aristotle's doctrine is this: It is not true that all men are always capable of laughter, nor even that all men are always biped. Rather, for the most part—for most men and for most of the time—things are so. 'For the most part' is then a quantifier, and a rival to 'every and always'. Another interpretation takes 'for the most part' as a modal operator—and as equivalent to the operator 'naturally'. Thus 'For the most part, men go grey' means 'Naturally, all men go grey', the operator combining with the usual quantifier. Porphyry—following the *Topics*—implicitly suggests a third interpretation: keep the adverb 'naturally' but treat it not as an operator on sentences but as a modifier of predicates. The truth about old age is this: All men naturally go grey. The predicate 'naturally greying' holds of every man without exception. More precisely, Porphyry thinks that the ordinary predicate 'greying', at least when it is used in the sentence 'Men go grey', contains the notion of nature: it means 'naturally greying'.

The advantages of Porphyry's proposal are plain: we may stick with the familiar logic of the standard quantifiers—we are not obliged either to worry about the quantificational logic of 'most' or to devise a semantics for the operator 'naturally'. No doubt there are compensating disadvantages.²

² On 'for the most part' in Aristotle see e.g. Mignucci, 'Ως ἐπὶ τὸ πολὺ'; Judson, 'Chance'.—At 19.8 Boethius' translation has a phrase to which nothing corresponds in the Greek tradition: 'non substantiam permit'. The Greek is elliptical. The addition makes things easier for the reader—no doubt it is a gloss. Indeed, it is perhaps a gloss on Boethius' translation. For the phrase is not alluded to in Boethius' commentaries.

(D1) A difference applies to several species, a property to a single species. [19.11–13]

See 18.19–21. Both points are contestable: above, pp. 191–193 and 262–263.³

(D2) Differences follow their subjects but do not convert: properties are counterpredicated. [19.13–15]

See 16.11–14.⁴

³ The example is ‘man and god’ in Boethius’ translation, ‘angel and man’ in the Greek manuscripts: see 14.2 and note.

⁴ For the past tense, ‘ $\hat{\eta}\nu$ ’, at 19.13 see p. 87 n. 102.—At 19.14 read ‘ $\hat{\epsilon}\sigma\tau\iota$ ’ (with M and Boethius) rather than Busse’s emendation ‘ $\hat{d}\nu\ \hat{\eta}$ ’.

§13: DIFFERENCES AND ACCIDENTS

There are two common features and three differences.

(S1) Differences and accidents alike hold of a plurality of subjects. [19.17]

So 13.10.

(S2) Differences and inseparable accidents hold always and of every one of their subjects. [19.18–19]

See 18.13–14.

For differences, the point is trivial (mutilations apart). *Per se* accidents hold always of every member of their species. But if an inseparable accident is a feature which, once gained, cannot be lost, then there may be acquired inseparable accidents.¹ Thus white is an inseparable accident of swans and yet does not hold of them always—cygnets are yellow. (Or is the inseparable accident not ‘white’ but ‘naturally white’ or ‘white when adult’?)

(D1) Differences contain and are not contained by their subjects: accidents in a way contain and in a way are contained. [19.21–20.3]²

This is an odd way to announce a dissimilarity; and the remark about differences is disputable.³

Accidents contain their subjects ‘insofar as they are in several items’. Does Porphyry mean that one and the same accident is found in more than one species (there are black ravens and there are black bears)? Or that an accident holds of more than one member of a species (Socrates

¹ See above, pp. 225–226.

² See 13.23–14.3; for ‘contain [$\pi\epsilon\rho\iota\epsilon\chi\epsilon\nu$]’ see above, p. 114.

³ See above, pp. 182, 246.

is snub-nosed and so is Albert Camus)? Presumably the former. But why then do accidents contain ‘in a way’ and not without qualification? Perhaps because accidents are ‘in’ their subjects rather than being predicated of them ‘as subjects’?⁴

An accident is contained by its subject inasmuch as the subject will also possess other accidents. Perhaps it is true that any item which has an accident has at least two accidents. But if that is what ‘contain’ is taken to mean, then at least some differences are contained.⁵

(D2) Differences do not admit of degrees, accidents do.
[20.3–5]

See 16.3–6—and already at 9.16–23.⁶ Dexippus takes this to be the decisive difference between differences and inseparable accidents (above, p. 173); and Simplicius echoes him:

inseparable accidents . . . are not separated without the destruction of the subject. But if they are not separated, they do admit of increase and decrease—like the black of an Ethiopian who moves to other parts; and the whiteness of milk is less, that of snow more; and similarly in the case of the other inseparable accidents. (*in Cat* 98.13–17)

(D3) Contrary differences are unmixed, contrary accidents may mix. [20.5–6]

The point has no parallel in the *Introduction*. (It has nothing to do with the compounding at 19.1–3).⁷

In the *Topics* Aristotle asserts that

items which are more unmixed [*ἀμιγέστερα*] with their contraries are more such-and-such—e.g. what is less mixed with black is whiter. (119a27–28)⁸

⁴ See above, pp. 230–232.

⁵ So Boethius, *in Isag*² 335.13–17 (men are both rational and mortal)—his defence of Porphyry, *ibid* 335.18–336.8, is worthless.

⁶ The two privative adjectives are also found at *in Cat* 138.5: ‘ἀνάνετος’ is not found before Porphyry; ‘ἀνεπίτατος’ occurs at Sextus, *M* X 272.

⁷ But note the use of ‘ἀμιγῆς’ at Plato, *Plt* 265E, the text which Porphyry has in mind at 19.1–3.

⁸ Cf *Phys* 226b7–8 (‘the more and the less come about by there inhering greater or less of the contrary’); 229a2–3 (‘the less is always a mixture of the contrary’).

Mixing is thus associated with degrees: if white is ‘mixed’ with its contrary it thereby becomes less white. Being mixed with a contrary will then be a way—or perhaps the way—of having a degree of a certain feature. And since differences do not admit degree, they do not allow mixing. Thus according to Ammonius, quantities

do not admit the more and the less; for where there is contrariety, there is found the more and the less, and where there is not, the more and the less is not to be found—for more and less comes from a mixing of contraries. (*in Cat* 65.13–16; cf 70.18–20; 89.24–90.5)

Boethius has a different interpretation:

It is evident that contrary accidents can co-exist in a single species—for black and white can co-exist not only in a single species but in an individual (a man can be white and yet have black hair). (*in Isag*¹ 125.9–13)

That is to say, a predicate mixes with its contrary insofar as both predicates may be true of the same item (in different respects), or of different items in the same species (there are white swans and black swans).

Whichever interpretation is adopted, note that Porphyry does not say that all accidents have contraries, nor that all accidents which have contraries will mix with them. He says only that some accidents may mix with their contraries.⁹

⁹ Some MSS (and the Armenian version: Sgarbi, ‘Osservazioni’, p. 462) add ‘ποτε’ to the sentence, which makes the limitation explicit.

§14: SPECIES AND PROPERTIES

Porphyry offers two similarities and four differences.

(S1) Species and properties convert. [20.12–14]

See 16.11–14.

The distinction between actually laughing and being capable of laughter has been made if not ‘often’ then twice (12.18–20; 19.8–9). But how is conversion a feature common to species and properties?

(S2) Species and properties alike hold equally. [20.14–15]

See 16.3–6.

There is a textual point. At 20.14 the Greek manuscripts have ‘ἐπίσης τε πάρεστι’,¹ with a few uninteresting variants. Boethius translates ‘aequaliter enim sunt’ and so must have read ‘ἐπίσης γάρ ἐστι’. Busse prints a nonsensical conflation: ‘ἐπίσης τε γάρ ἐστι’. The question is this: should we have ‘γάρ’ with Boethius or ‘τε’ with the Greeks?

With ‘γάρ’, 20.14–15 explains or justifies (S1). Boethius himself notes the evident objection: ‘this reason does not seem to be appropriate to the conversion of the predication’; and he suggests that ‘we ought to take *aequaliter enim* . . . as though it were a second common feature’ (*in Isag*² 337.10–18). Busse answers the objection by referring to 22.8, where—given the text he prints—two predicates are said to hold equally if and only if they convert. This use of ‘ἐπίσης’ is attested elsewhere—in Aristotle, in Alexander, and in Porphyry himself;² and if the word ‘ἐπίσης’ is so used at 22.8, why not take it in the same way at 20.14?

¹ This is also the reading presupposed by the Armenian translation: Sgarbi, ‘Osservazioni’, p. 463.

² See *in Cat* 117.27–31 (and note ‘ἴσα’ at 7.4); cf e.g. Aristotle, *Top* 122b37–123a1 (where ‘ἐπί’ ‘ἴσης’ contrasts with ‘ἐπὶ πλεῖν’); Alexander, *in Top* 44.28–29 (‘Definition and identity do not convert, nor do they hold equally, nor do they counterpredicate’—where the three expressions are plainly equivalent); cf 46.30–47.1; 63.27–28; *in APR* 25.7–9; 72.23; 125.20–21; 295.6–7; 328.29.

Well, first, Busse's text at 22.8 is wrong. Secondly, the usage does not fit 20.14–15. Porphyry does not say that species and properties 'hold equally' with one another: he says that species 'hold equally' of their participants, and so do properties of theirs. If we take ' $\hat{\epsilon}\pi\iota\sigma\eta\varsigma$ ' in Busse's sense, Porphyry means that a species has the same extension as its subjects—that is to say, a species applies to all and only the items to which it applies.³ This banality could hardly be offered as a reason for the convertibility of species and properties.

With ' $\tau\epsilon$ ', 20.14–15 introduces a second feature common to species and properties; and the text is parallel to 16.3–6, on genera and properties.

In brief, ' $\gamma\acute{a}\rho$ ' is hopeless, ' $\tau\epsilon$ ' impeccable—why anyone should waste a page over the choice I cannot tell.

(D1) **A species of one item may be a genus of another, a property of one item cannot be a property of another.**
 [20.17–18]⁴

This is the sense of the Greek text. The claims are true; but how do they differentiate species from properties? After all, just as X may be predicated specially of Y and generally of Z, so X may be predicated properly of Y and accidentally of Z.

Boethius had a different reading: 'a property is not of other species'.⁵ He took this to mean that a property may not be a genus of other species. But his text is difficult and his interpretation forced (*in Isag*² 339.11–14).

Perhaps Porphyry meant to say this: If X holds specifically of Y and also of Z, then it does not follow that Y is the same subspecies as Z;⁶ but if X holds properly of Y and also of Z, then Y and Z are the same species.

³ This is offered by Boethius, *in Isag*² 337.18–338.3, as a possible interpretation of his text.

⁴ For 'one/several' differences see 15.4–6.

⁵ He translates 'specierum' at 20.18: i.e. he read ' $\epsilon\iota\delta\hat{\omega}\nu$ ' where the Greek MSS have ' $\iota\delta\iota\omega\varsigma$ '.—At 20.17 he read ' $\kappa\alpha\iota$ ' before ' $\ddot{\alpha}\lambda\lambda\omega\varsigma$ ', like some of the Greek MSS and the Armenian version (Sgarbi, 'Osservazioni', pp. 463–464); and this is presumably the correct text.

⁶ This is true, as Boethius remarks, for subaltern species (*in Isag*¹ 126.9–16; *in Isag*² 339.7–11).

(D2) A species presubsists its properties. [20.18–20]⁷

See 15.16–18 (and 16.9–10 on genera and properties).

Earlier, pre-existence was glossed in terms of causal or explanatory priority: genera pre-exist their species inasmuch as they are formal causes of them. A species is presumably a formal cause of its properties: ‘Why is Socrates capable of laughing?’—‘Well, he’s a man’. That is to say, the nature of man—and in particular, his rationality—explain how it is that men can laugh.

(D3) Species always hold in actuality, properties may hold potentially. [20.20–22]

Despite 20.13–14, Porphyry appears to construe the property of man as ‘actually laughing’ and not as ‘capable of laughing’ (or ‘naturally capable of laughing’). That is to say, instead of:

(1) Laughing potentially is an (actual) property of man,

he says:

(2) Laughing (actually) is a potential property of man.

It is hard to believe that Porphyry has so far forgotten himself—and in any event, what might (2) mean?

According to Boethius, what he means to say is this: if X holds specially of a, then it is always equivalent to ‘actually X*’; but if X holds properly of a, then it may be equivalent to ‘potentially X*’. Properties may be potentialities: species may not. This is some way from the Greek.⁸

(D4) Species and properties have different definitions. [20.23–21.3]

And so, trivially, do all the five items. After all,

it is not possible for there to be one definition of two items or two of one.
(Aristotle, *Top* 154a10–11; cf 151a33–34, b16–17)

⁷ For ‘προϋφίστασθαι’ see above, p. 257 n. 5.

⁸ See Boethius, *in Isag*¹ 127.1–9; but on the basis of a bad translation of the Greek text (or a translation of a bad Greek text). The interpretation does not reappear in the second commentary, which is based on Boethius’ own translation.

Some had used this triviality to devious ends:

The philosophers called Megarics, taking it as an evident proposition that items with diverse accounts are themselves diverse, and that diverse items are separated from one another, thought that they could show that each item is separated from itself. For since there is one account of musical Socrates and another of pale Socrates, Socrates will be separated from himself. (Simplicius, *in Phys* 120.12–17)

But the Megaric sophism was not taken to place the ‘evident proposition’ in doubt.

According to the orthodox view, Porphyry thinks that species certainly and properties probably cannot be defined.⁹ Hence we might construe the word ‘*όποι*’ at 20.23 in a weak sense—and [Elias] for one glosses it by ‘delineations [*ὑπογραφαί*]’ (*in Isag* li 22). This is the more plausible inasmuch as Porphyry gives two accounts of ‘species’ (taken from 4.10 and 12) and indicates that there are others he might have cited: if there may be only one definition of an item, there may be several delineations.

But this undermines (D4). For if one delineation is different from another, it does not follow that they are delineations of different items—and the existence of different delineations of species incongruously illustrates the point.

⁹ See above, pp. 57–62.

§15: SPECIES AND ACCIDENTS

Porphyry mentions a single common feature, and four differences.

(S1) **Species and accidents alike hold of several items.**
[21.5–7]

The same feature (for which see 13.10) was the sole item common to genera and accidents (16.20–17.2), and the sole item common to differences and accidents in general (19.17–19). But only here does Porphyry explain why ‘the other common features are rare’. (He does not indicate what those other features are.) The commentators tacitly improve his presentation, putting the explanation among their remarks on genera and accidents (e.g. Ammonius, *in Isag* 122.2–15; Boethius, *in Isag*¹ 116.6–9; *in Isag*² 313.7–11).

‘Accidents and that of which they are accidents are set furthest apart from one another’. The implicit argument is this: the further apart X and Y are, the fewer features they have in common; accidents and their subjects are furthest apart: therefore there are fewest common features of accidents and their subjects. The subjects here are the species (and not the individual members of the species). So Porphyry suggests that, say, ‘black’ and ‘raven’ are furthest apart. Does he mean that ‘black’ is further from ‘raven’ than it is from, say, ‘bird’?—that accidents are further from their species than they are from the genera of their species? In that case, he has a reason for placing the note on rarity here and not earlier. Or does he mean (as the commentators suppose) that ‘black’ and ‘raven’ are as far apart as any two items can be?

How, in any case, are distances to be judged? Perhaps two items are far apart inasmuch as they have few features in common, the distance between them being measured by the number of their common features. This makes a tautology of Porphyry’s explanation. Nor does it decide between the two interpretations of his remark. But it is hard to dream up anything better.

(D1) **Species are predicated in answer to ‘What is it?’, accidents in answer to ‘What sort of thing is it?’ or ‘What is it like?’. [21.9–10]**

See 15.2–4.

(D2) **Each substance partakes in a single species but in several accidents. [21.10–12]**

For the point about accidents see p. 289. What Porphyry says about species holds only of lowest species.¹

Porphyry speaks explicitly of substances. Does he think that non-substances partake in more species than one? Surely not. Or that non-substances do not partake in several accidents? Well, Aristotle announces that ‘an accident is not an accident of an accident’ (*Met* 1007b2–3; cf. *APst* 83b19–24); and non-substances cannot partake in a plurality of accidents if they cannot partake in accidents at all. But whatever Aristotle may mean, it can hardly be pertinent here. Qualities are one sort of accident. Among qualities are colours—red, white and blue. These items have various accidental predicates true of them: some reds are saturated and others unsaturated, some are dark and others light, some enchant Aunt Agatha and others do not; and so on. Neither Aristotle nor Porphyry can have meant to deny these trifling facts. So the phrase ‘each substance’ at 21.11 is misleading—Porphyry might better have said ‘everything’.²

(D3) **Species are thought of before accidents. [21.12–15]**

See 14.21–15.2; but the closest parallel is at 20.18–20, where there is a comparable *iv̄a* clause.

This is the last of several passages in which Porphyry reflects on priority among the five items. It is by no means the easiest to understand.

¹ For ‘one/several’ differences see 15.4–6.

² Arethas raises the issue. One of his solutions is to say that Porphyry is thinking of families of genera, species etc, and that in any such family the genus can be thought of as a substance (*in Isag* 127.11–28).

The priority here is some sort of ‘priority in thought’: at least, Porphyry speaks of ‘being thought of before’ rather than of subsisting before;³ and the two notions ought to be distinct—thus Alexander says that

a goal does not pre-subsist that of which it is the goal; rather, it is merely thought of before it, supervening upon that of which it is the goal. (*in Met* 121.22–25)

Again, at *in Met* 347.24–27, ‘προϋπάρχειν’ and ‘προέπινοεῖσθαι’ are plainly distinct. Distinct but connected; for Porphyry argues that species are thought of beforehand because ‘there must be a subject in order for something to be its accident’; and accidents differ from species inasmuch as they ‘are of such a nature as to be later-born and have an adventitious nature’.

Other texts connect priority in subsistence and priority in thought. Thus Chrysippus urged against Ariston, who identified the good with ‘indifference’, that you cannot think of the indifferent unless you have first thought of the good and the bad; so if Ariston is right,

indifference will apparently pre-subsist itself—if you cannot think of it without first thinking of the good, and nothing but indifference itself is the good. (Plutarch, *stoic rep* 1071F–1072A)

And in Alexander there is something closer to Porphyry:

Even if body and soul are parts of an animal, they are not later-born [*νότερογενή*] than the animal but simultaneous with it—for it is impossible to think of [*νοήσαι*] an animal without co-conceiving [*συνεπινοοῦντας*] both soul and body. (*in Top* 383.10–12)

Like Porphyry, both Chrysippus and Alexander connect the order of thought with the order of existence or of ‘birth’. But whereas Chrysippus and Alexander suggest that if you cannot think of X without first thinking of Y, then X is later-born than Y, Porphyry runs the implication in the opposite direction. Perhaps the implication was supposed to run in both directions?

However that may be, what variety of priority does (D3) invoke? The two imposing adjectives, ‘later-born’ and ‘adventitious’, might offer an answer—in any event, they ask for a note. ‘Later-born [*νότερογενής*]’ is a good Aristotelian word; but Aristotle uses it in a biological sense—

³ For ‘προέπινοεῖσθαι’ see also *in Tim* II frag 37.8–9 = Philoponus, *aet mund* 148.19 (paraphrase, not citation); Plotinus, *enn* V ix 8.11–12. The term is not peculiarly Platonic: see the texts from Plutarch and Alexander quoted below; Sextus, *PH* III 28; Strabo, II v 1 [109].—Note also ‘συνεπινοεῖσθαι’ at *in Cat* 109.34–110.3.

except at *Met* 1091a29–33. It was never popular,⁴ but before Porphyry's time it had been used, in Porphyry's sense, by Sextus (*M* VII 225, in a report of Peripatetic doctrine), by Alexander (*in Top* 383.10–12), and by Nicomachus.⁵

'Adventitious' translates 'ἐπεισοδιώδης', the reading of most of the Greek MSS. The word is found in Aristotle, at *Met* 1075b37–1076a2 (criticism of those who make 'the substance of everything episodic'—who are generally identified as Speusippus) and again at 1090b19–20 ('nature is not episodic, like a bad tragedy').⁶ And elsewhere Aristotle explains it:

I call episodic a story in which there is neither plausibility nor necessity that the episodes succeed one another. (*Poet* 1451b34–35)

The Aristotelian passages have been held to confirm the reading 'ἐπεισοδιώδης' in our text.⁷ They do not. For Porphyry does not mean to say that accidents have an episodic or disconnected nature; and the texts from the *Metaphysics* are irrelevant.

It then becomes tempting to read 'ἐπουσιώδης', which is offered by some of the Greek MSS. The word means 'post-substantial', and it applies to items which come after and depend upon substances. It is used by Alexander in the pertinent way,⁸ and it makes excellent sense in our text. Nonetheless, we should stick with 'ἐπεισοδιώδης', giving it an unAristotelian sense: 'secondary', 'adventitious'.⁹ The related adjective 'ἐπεισόδιος' has this sense in Plutarch, and in Plotinus, and elsewhere.¹⁰ And 'ἐπεισοδιώδης' itself has the same sense in Porphyry's *Sentences* (36), and in other Platonic texts besides.¹¹

The grandiloquent terms advert to some sort of priority—but to what sort? Surely not chronological priority. For no item can exist before all its accidents, and there are some accidents (*per se* accidents) before which an item cannot exist.

⁴ But note the grammarians' use—e.g. Herodian, *decl nom* III ii 660.35–661.5 (the dual form of the verb is νότερογενής than the plural).

⁵ See *introdr arith* I iv 3 ('ύστερογενεστέρα'), where it is followed by 'προγενεστέρα' (4) and taken up by 'μεταγενεστέρα' (I v 2). Note also 'πρεσβύτερον' (I iv 2) and 'νεώτερον' (3) in the same context.—At *Plt* 288E–289A, Plato has 'πρωτογενής'.

⁶ Word and criticism repeated by Theophrastus, *Met* 4a13–18.

⁷ So Prantl, *Logik*, p. 631 n. 58.

⁸ See *in Top* 369.15–17 (general problems are substantial, proper problems post-substantial); 388.6–14 (definitions are substantial, properties post-substantial).

⁹ Boethius translates 'adventicius'; and, in the first commentary, glosses by 'a foris venientia', which shows that he (and Victorinus before him) read 'ἐπεισοδιώδης'.

¹⁰ e.g. Plutarch, *virt mor* 451c; *gen Soc* 584c; Plotinus, *enn* III iii 3.2–3.

¹¹ See Theo, *math* 201.2–3; Iamblichus, *protr* iii [14.9–12]; cf [Heron], *def* cxxxvi 2 [110.5–6].

Boethius says that a species is prior to its accidents in the way in which matter is prior to form (*in Isag*² 315.1-6). And at *Met* 1019a7-11 Aristotle recognizes a sense of 'prior' in which matter is prior to substance—it is prior 'according to potentiality'. The thesis is obscure, and its pertinence to Porphyry dubious.

Aristotelian primary substances are prior to their accidents in the following way.¹² Just as a given species, the wombat (say), does not require a given accident, brown (say), so a given accident does not require a given species. In this respect 'wombat' and 'brown' are on all fours. Or at least, wombats are. But there is an asymmetry: What it is for there to be brown items is for there to be some substance or other which is brown ('There are brown items' means 'Some substance is brown'); but what it is for there to be a wombat is not for there to be something or other which is wombatty ('There are wombats' does not mean anything of the form 'Some so-and-sos are wombatty'.) And in that way accidents are adventitious upon substances.

But this sort of priority, which a reader of the *Introduction* is unlikely to hit upon, does not answer to Porphyry's needs; for the Aristotelian asymmetry contends, not that accidents are posterior to species, but that accidents are posterior to substances; it urges, not that brown is posterior to wombat, but that brown is posterior to substance.

Causal or explanatory priority is equally *hors de combat*; for accidents—or at least some accidents—are principally predicated of individuals, not of species, so that you do not explain why Donald is white by remarking that he is a duck.¹³ And natural priority, as determined by the rules of priority, is no better. For the rules do not make species prior to their accidents, ravens prior to black.¹⁴

It is tempting to adopt a suggestion made, in a different context, by David.¹⁵ Ravens are not prior—by the rules—to black; but they are prior to black ravens. (Even if ravens are necessarily black, it is not inconceivable that there be ravens and yet no black ravens.) Moreover, you cannot think of black ravens without thinking of ravens, but you can think of ravens without thinking of black ravens—if you think that Roderick is a black raven, then you think that he is a raven; but you may think that he is a raven without thinking that he is a black raven.

¹² See above, p. 251.

¹⁴ See above, pp. 246-247.

¹³ See above, pp. 238-241.

¹⁵ See above, p. 247.

Perhaps this is the nub of (D3)? True, it is a cheat—for it does not strictly compare accidents to species. But it is hard to find anything less unsatisfactory.

(D4) **Species hold equally of their subjects, accidents do not.** [21.15–17]

See 16.3–6.¹⁶

¹⁶ At 21.17 Boethius renders ‘ἀνειμένην’ by ‘*intentum amplius*’: perhaps he read—and we should read—‘ἀνειμένην μᾶλλον’? (So de Libera, *Isagoge**, p. 69 n. 142.) But the reading offered by the Greek tradition, though abrupt, is idiomatic.

§16: PROPERTIES AND ACCIDENTS

Two similarities and three differences. The two common features unite properties with inseparable accidents: Porphyry offers no feature common to properties and accidents in general.

(S1) Their subjects cannot subsist without them. [21.21–22.1]

This is true of *per se* accidents, not of acquired inseparable accidents.¹ As for properties, here Porphyry supposes that if X is predicated properly of Y, then X holds necessarily of Y—necessarily, if anything is a man it is a laughing item. This supposition is not avowed in § 4. But it lurks beneath the surface of the text.² Its converse—if X is predicated properly of Y, then Y holds necessarily of X—is advanced by Aristotle: No-one calls a property something which can hold of something else, e.g. sleeping of man . . . For it is not necessary that if something is sleeping, it is a man. (*Top* 102a22–23, 29–30)

And indeed Aristotle maintains that if X is a proper predicate of Y then X holds necessarily of Y and Y holds necessarily of X. Thus

in attacking, see whether he has presented as a property something which does not always follow but sometimes is not a property of it—for the property will not have been well given. For it is the case neither that, when we find that it holds of something, the name too is necessarily true of that item, nor that, when we find that it does not hold of something, the name will necessarily not be said of the item. (*ibid* 131a27–32)³

Suppose that there is a predicate which holds of all and only a species, but not by necessity: perhaps there is a single species of animals which happens to be found only on St Helena; perhaps the pineapple happens to be the only species to possess the particular savour of that celebrated delicious fruit. Such items are problematic for Aristotle: they are not properties, since they hold contingently; they are not accidents inasmuch as they convert. They will be problematic for Porphyry if he too holds that accidents do not convert (see 22.8–9).

¹ See above, pp. 225–226.

² See above, p. 268.

³ Cf e.g. *Top* 129a3–5; 133a12–23; see Barnes, ‘Property’, pp. 138–139.

(S₂) Properties and inseparable accidents hold always and of every one of their subjects. [22.2–3]

See 18.13–14. Again, the point is false of acquired inseparable accidents.

(D₁) Properties hold of a single species, inseparable accidents of several. [22.5–7]

Why does Porphyry mention only inseparable accidents?⁴ If the remark is true, is it not true of accidents in general? Again, does Porphyry mean that no inseparable accidents hold of a single species or rather that it is not the case that all inseparable accidents do?

(D₂) Properties counterpredicate, inseparable accidents do not. [22.8–9]

Properties counterpredicate ‘and hold equally’—so 22.8, according to the *paradosis*. (See 20.14, note.) If the adverb ‘equally’ is used in its standard way, then the remark inanely anticipates (D₃). If the adverb is used to indicate equivalence,⁵ then the point is misleadingly expressed—and otiose. The words should be deleted.⁶

Nothing in the definitions of accidents requires that they be non-convertible. Aristotle nonetheless takes them to be so (*Top* 103b7–17: below, p. 303). Porphyry expressly states (D₂) for inseparable accidents, thus suggesting—or at least, not denying—that separable accidents may convert. Does he even hold that no inseparable accidents convert? On the one hand, his words might reasonably be construed as saying that it is not the case that all inseparable accidents convert; on the other hand, the fact that he mentions inseparable accidents in particular rather than accidents in general suggests that he means that no inseparable accidents convert.

⁴ Ebony is an example of a species only here in *Isag*: not in Aristotle, nor in Alexander.—See 15.4–6 for comparable ‘one/several’ points.

⁵ See above, p. 291.

⁶ The Greek tradition begins the sentence with ‘again [ἔτι]’, thus making it a separate point from (D₁). Boethius has ‘quare’ and so presumably read ‘διό’ (cf. 14.22) or ‘ῳστε’: then (D₂) is a corollary of (D₁).

(D3) Properties hold equally of their subjects, accidents do not. [22.9-10]

See 16.3-6. The point holds even of (some) inseparable accidents; for Theaetetus is like Socrates with regard to being snub-nosed and having protruding eyes—but not equally with Socrates. (anon, *in Thet* IX 13-19)

There are other similarities and dissimilarities—but that is enough. [22.11-13]⁷

In the *Topics* Aristotle claims that every problem and every proposition indicates one and only one of his four predicables (101b17-25). He is speaking of dialectical propositions and problems; but when he comes to argue for the claim his argument is universal in scope. The commentators take him to urge that if X is predicated of Y, then it is so predicated either generally or definitionally or properly or accidentally—and in not more than one of those ways. That is the ‘system’ of the Aristotelian predicables.

This is Aristotle’s argument:

One warrant for this comes by way of induction—if you consider each proposition and problem, it will clearly have come about on the basis of a definition or a property or a genus or an accident. There is another warrant by way of deduction: It is necessary that everything which is predicated of something either be counterpredicated of the object or not. If it is counterpredicated, it will be a definition or a property—if it signifies what it is to be the object, a definition, and if not, a property. . . . If it is not counterpredicated of the object, either it is one of the items mentioned in the definition of the subject or it is not. If it is one of the items mentioned in the definition, then it is a genus or a difference . . .; if it is not one of the items mentioned in the definition, clearly it is an accident . . . (*Top* 103b3-17)

The induction found little following. The deduction is analysed by Alexander (*in Top* 63.20-65.3), who also offers a variant of his own (*ibid.* 37.31-38.21); and it is repeated by Apuleius—as though it established his pentad of items (*int vi* [197.17-198.1])—and by Boethius (*top diff* 1177D-1178B).

⁷ At 22.12-13 Boethius gives ‘*traditionem*’, which suggests that he read ‘*παράδοσιν*’ rather than ‘*παράστασιν*’. ‘*παράστασις*’ usually means ‘establishing’; but for the sense of ‘setting down’ see e.g. *in Cat* 55.8-14; anon, *in Parm* IX 14-16.

Every predication is either definitional or non-definitional, and either convertible or non-convertible. Convertibility has already been explained. X is definitional of Y if and only if it is either the definition or else a proper part of the definition of Y. Hence there are four conjugations, mutually exclusive and jointly exhaustive:

- (A) definitional and convertible
- (B) definitional and non-convertible
- (C) non-definitional and convertible
- (D) non-definitional and non-convertible

It is evident that, if X is predicated of Y, then it is predicated according to one and only one of the four conjugations.

It is less evident that conjugation (A) is definition, conjugation (B) genus, etc. For 'definition', 'genus', etc are not mere labels, stipulatively attached to their conjugations: Aristotle defines them. 'Definition' is defined as 'an account which signifies what it is for it to be' (*Top* 101b38), and definitions are convertible. So 'definition' is an appropriate label for (A). 'Property' is defined as a predicate which 'does not indicate what it is for the thing to be, and which holds of the object alone and is counterpredicated of it' (*Top* 102a18–19). Hence (C) is rightly labelled 'property'.

A genus is 'what is predicated, in answer to 'What is it?', of several items which differ in species' (*ibid* 102a31–32). This does not match (B). First, there are the familiar frailties of the question 'What is it'?⁸ Secondly, nothing in (B) corresponds to the clause 'which differ in species'. As for (D), Aristotle offers two definitions of accidents (*ibid* 102b4–7). The two are not equivalent.⁹ The 'negative' definition—'what is neither definition nor property nor genus'—fails to match (D) to the extent to which genera fail to match (B). The 'positive' definition—'what can hold and not hold of the same item'—does not fit (D); for nothing in it ensures that accidents will be non-convertible.

Thus Aristotle's deduction of the system of the four predicables needs some tidying up. And there is another question: is the system useful?—does it serve Aristotle's purposes or accord with his practice? The answer is a loud No: in the *Topics* the term 'accident' is rarely used in the senses determined by the two definitions or implied by the conjugations; the term 'property' is used sometimes in a more relaxed sense than the definition and the conjugation determine, and sometimes in a tighter sense; the term 'genus' (so far as I have noticed) is never used

⁸ See above, pp. 85–92.

⁹ Above, pp. 233–235.

according to the indications of conjugation (B) and by no means always according to the official definition. In short—and the point is familiar—the system which Aristotle offers at *Top* 103b3–17 does not determine his philosophical practice.¹⁰

What of Porphyry? He offers no conjugations to compare to the Aristotelian (A)–(D). The commentators offer him a division—or rather, a choice of divisions. Here is the second of the three which Boethius offers in his second commentary and which he describes as ‘more convenient’ (*in Isag*² 186.12). It is presented as a division ‘of everything which is predicated in any fashion’ (*ibid* 183.13).¹¹ (see fig. over)

The division cannot be used to define its root terms—for it makes essential use of the term ‘species’. Nonetheless, given that its terms are well defined, it is coherent: whenever X is predicated of Y, it is predicated according to one and only one of the six roots determined by the division. And—more pertinent to Porphyry’s pentad—whenever X is predicated of a plurality, it is predicated according to one of the roots (E)–(J).

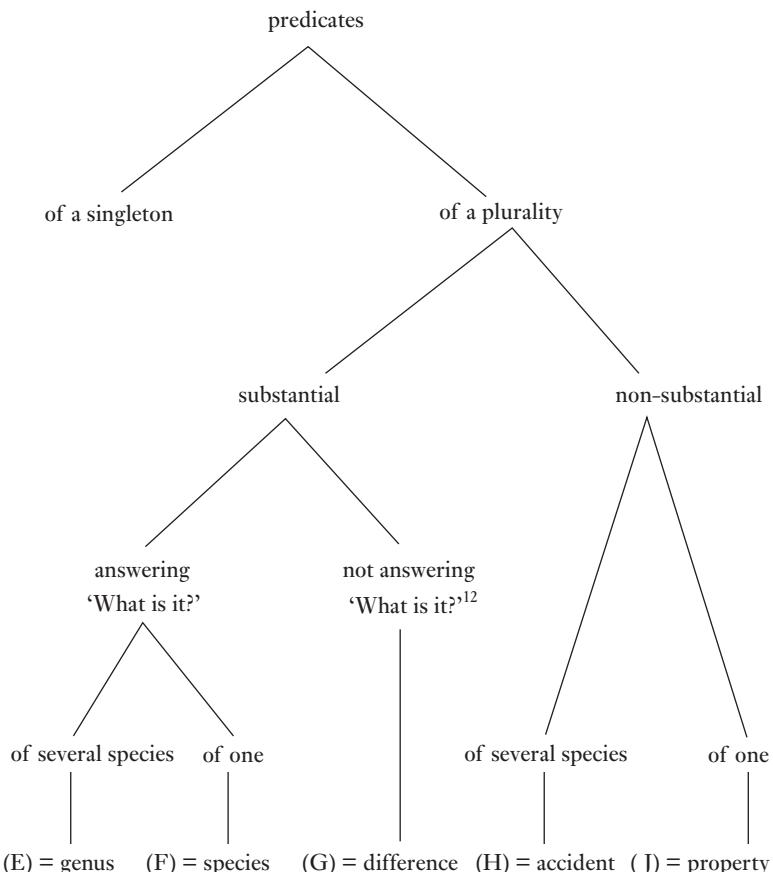
How does the division compare with the Aristotelian conjugations? The first line of the division—singletons vs pluralities—corresponds to nothing in the Aristotelian presentation. It is often said that Aristotle excludes individuals from the ambit of dialectic or from the subject matter of the *Topics*. This is not strictly true; and in any event individual predicates do not, and cannot, fall outside the scope of his conjugations. In other words, the Porphyrean division hives off individual predicates whereas the Aristotelian conjugations do not.

The second line of the division—substantial vs non-substantial—apparently corresponds to one of the two distinctions on which the conjugations are based. For X is predicated substantially of Y if and only if X is definitional of Y. (But there is a hitch.)

The third line—‘What is it?’ vs anything else—has no counterpart in Aristotle’s scheme: it is this line which allows the division to mark off differences as a particular mode of predication, something for which

¹⁰ See Brunschwig, *Topiques*, pp. LXXVI–LXXXIII; id, ‘Système des prédictables’; de Libera, *Isagoge**, pp. civ–cvi; Slomkowski, *Topics*, pp. 69–94; Primavesi, *Topik*, pp. 88–96; also Sainati, *Storia dell’Organon*, pp. 70–145

¹¹ *in Isag*² 186.12–187.1; cf 183.13–186.12 and 187.1–21. See also Ammonius, *in Isag* 58.16–60.6; cf 60.6–61.17; Elias, *in Isag* 35.17–36.30; [Elias], *in Isag* xxv 7–20. The chief difference between Boethius and his Greek colleagues is that they purport to divide expressions (*φωναι*) rather than predicates.—A comparable, but more elaborate, division in Whateley, *Logic*, II v 3.



Aristotle's scheme has no room. The fourth line, too, is unAristotelian. Its left half serves to distinguish species from genera, and thus has no counterpart at all in Aristotle. Its right half is designed to distinguish accidents from properties, and so to do the work which Aristotle did by appealing to convertibility.

It is sometimes said that Porphyry 'systematized' Aristotle's tetrad.¹³ But, on the one hand, it is hard to think how anything could be more

¹² Boethius actually divides into *quid* and *quale*.

¹³ 'Porphyry systematized the doctrine of the predicables' (Bochenski, *Formale Logik*, p. 155); 'This important little treatise . . . systematized the Aristotelian doctrine of the predicables' (P. Hadot, *Porphyre I*, p. 85); Porphyry 'codifies and systematizes' the theory of the predicables (Maioli, *Isagoge**, pp. 33–34); 'Porphyry was concerned to codify the

systematic than the Aristotelian scheme; and on the other hand, the systematic division is not present in Porphyry's text. The commentators systematize Porphyry, not Porphyry Aristotle.

It is sometimes urged that Porphyry improves on Aristotle. He recognizes, and sets aside, individual predicates. He admits special and differential predication—and in consequence modifies the Aristotelian notion of general predication. These are advances, in two ways: first, the distinctions which Porphyry makes are genuine ones, and it is on the whole a good thing to distinguish what is distinct; and secondly, anyone who is setting out to study philosophy and is going first to be inducted into Peripatetic logic will find the Porphyrean distinctions pertinent.

The *Topics* frequently talks of differences and of species. Alexander, it is true, argues that the *Topics* cannot interest itself in species; for Aristotle is concerned only with those predication the subject-terms of which are definable, and species are predicated of individuals, which are indefinable (*in Top* 39.2–10). In admitting species, then, Porphyry is not making explicit something which was implicit in the *Topics*: he is making—for better or for worse—a radical change.¹⁴ But Aristotle does talk about species in the *Topics*; and if individuals are not prominent in the work, they are not banned from it (any more than they are banned from the *Categories* or from the rest of the *Organon*). Consider, say, 121a35–39 (at 121a30 ‘γένος’ denotes a lowest species); or 122b20–24.

As for differences, they are undeniably in the *Topics*. Aristotle suggests that they are ‘general’, or can be treated (so far as the *Topics* is concerned) in the same way as genera. Alexander echoes the point—and he also says something similar about species:

Problems deriving from species, if there are any, may be subsumed under general problems; for species are said of several items and in answer to ‘What is it?’.
(*in Top* 295.16–18; cf 497.11–13)

No doubt for many purposes it is unnecessary to distinguish among genera and species and differences. But the *Topics* frequently does make

list of predicates’ which Aristotle had left ‘imprecise’ (Girgenti, *Isagoge**, p. 23); ‘Porphyry has simply raised to canonical status material which he found differently articulated’ (Zekl, *Einleitung**, pp. LVII–LVIII).—On the relation between the pentad and the tetrad see also Evangelio, ‘Aristotle’s doctrine’; ‘Averroes’.

¹⁴ So Brunschwig, *Topiques*, p. XLV n. 2; and de Libera, *Isagoge**, p. xciv: ‘Porphyry adds propositions which have a singular term as subject: hence species is naturally found in his list. This expansion of the sort of propositions is the result of an ontological decision: he effects a platonization of the Aristotelian theory of predicates as it is expressed in the *Topics*.’

such distinctions; and students of Aristotle's logic will have agreed that Porphyry filled a much-needed gap.

But what about definitions? Porphyry omits them—and surely that is a step backward? It has been argued that definitions can be found in the pentad.¹⁵ After all, the division divides all predicates, and definitions are predicates: hence they must be there somewhere. Perhaps they are there in the disguise of species? (For all definitions are of species.) Perhaps they are there piecemeal? (For all definitions are compounds of genera and differences.) The latter suggestion is hopeless. The former is half right. Definitions are substantial; they answer 'What is it?'; and some of them apply to items in several species and some to items in one species only. Hence they will be found at root (E) and root (F) of the division. The predicate 'rational mortal animal', for example, is at (F), among species; the predicate 'animate percipient substance' is at (E), among genera.

But no-one will believe that Porphyry took these definitional formulas to be predicated generally or specially of their subjects. 'Rational mortal animal' is not predicated specially of Socrates—any more than 'man' is predicated as a definition of him. If this goes against the division, then so much the worse for the division—it does not represent the notions which Porphyry expounds in the *Introduction*. If the division is to count as Porphyrean, it must be restricted in order to exclude definitions—it should be taken to divide simple predicates.¹⁶

However that may be, on the place of definitions Porphyry differs significantly from Aristotle. Perhaps he thought that definitions were not on the same logical level as genera and species and the rest. Or perhaps he had a pedagogical motive: definitions are constructed from genera and differences—it is therefore best to treat genera and differences and their fellows first, and to turn to definitions in a second course.

So much for Porphyry vs Aristotle.

Next, do the five Porphyrean items, as Porphyry delineates them, correspond to the five roots (E)–(J) of the division?

For genera, the answer is an easy affirmative: the different delineations which Porphyry presents are, on a charitable interpretation, equivalent to one another and correspond to root (E). Moreover, what Porphyry says about genera in the *Introduction* is consistent with the delineations and hence with root (E).

¹⁵ See Evangelou, 'Aristotle's doctrine', pp. 30 and 32; de Libera, *Isagoge**, p. xcii.

¹⁶ See above, pp. 72–73.

For species, the answer is an equally easy negative: root (F) answers to lowest species; Porphyry recognizes intermediate items as species—that is to say, there are species which, unlike the items determined by (F), are predicated of items different in species. The division does not yield species. Moreover, no division could do so; for divisions yield exclusive classes of items, whereas one and the same item may be both a genus and a species. To be sure, one of the delineations of species which Porphyry transmits limits the word 'species' to lowest species; and the *Introduction* sometimes says of species what is true only of lowest species. But that is only to say that the text vacillates.

Next, differences and root (G). By and large, things cohere. But one point raises a minor question. According to the leading definition, a difference is predicated of items which differ in species.¹⁷ This is not guaranteed by (G). Now the distinction between genera and species quickly suggests a parallel distinction between 'general' differences and 'special' differences.¹⁸ The division might easily have accommodated this distinction.

Root (H) assembles non-substantial predicates which hold of a plurality of species, root (J) non-substantial predicates which hold of a single species. The former are labelled accidents, the latter properties. But although this odd way of distinguishing accident from property has its foundation in the *Introduction*, it does not fit the definitions which Porphyry gives: nothing in the definitions of accident implies that an accident must hold of several species; and nothing in the definition of property implies that a property is true of a single species.

The commentators make matters worse; for they think that properties are themselves accidents. Thus Boethius says that 'a property is a kind of inseparable accident' (*in Isag*² 345.14).¹⁹ For

all properties belong to the genus of accidents. For whatever is predicated of anything either forms its substance or is in it as an accident. There is nothing which shows a thing's substance save genus, species and difference . . . So whatever is left is put among accidents. (*ibid* 276.3-9)

His view was not revolutionary—Alexander had asserted that 'properties are accidents' (*in APr* 338.14). Properties are non-definitional

¹⁷ See above, pp. 191-193.

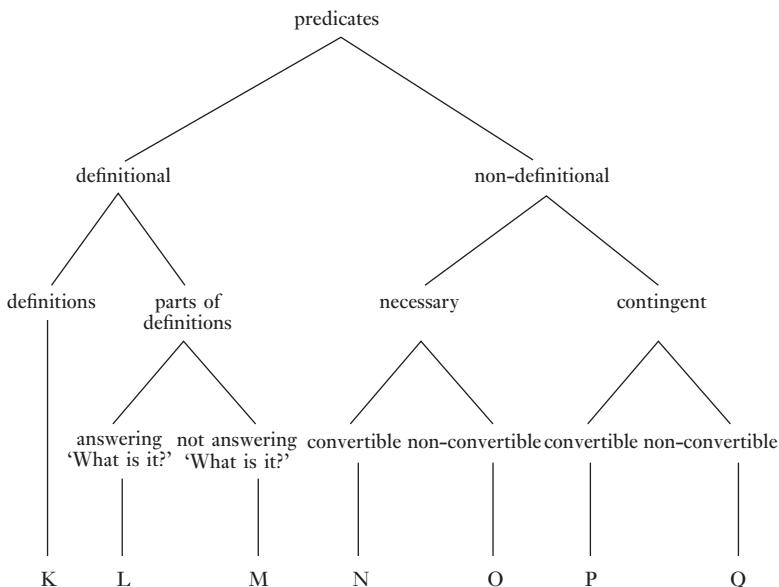
¹⁸ See above, p. 163.

¹⁹ The relation between properties and *per se* accidents in Aristotle is a matter of controversy: one or two texts suggest, and several scholars affirm, that all *per se* accidents are properties of their subjects; other texts suggest, and general considerations encourage, a different view. See Barnes, 'Property', pp. 139-140; Hadgopoulos, 'Definition'; Wedin, '*Per se* accidents'; Graham, 'Counterpredicability'.

according to Aristotle; and they are non-substantial according to the Porphyrean division. In one established sense of ‘accident’, what is not definitional or substantial is thereby accidental—hence properties are accidents. And given that properties hold necessarily of their subjects, they are inseparable. Hence they are inseparable accidents.

Whatever may be made of that conclusion,²⁰ the Porphyrean distinction between inseparable and separable accidents answers to nothing in the division; and yet it seems to be at least as imposing as the distinction between, say, genera and species.

For these and other reasons, the ancient divisions are less than satisfying. They might be improved upon—for example:



Here (K) is Aristotle's (A), and so answers to nothing in Porphyry. (L) answers to (E) and (F)—for no division can catch the distinction between genus and species. (M) corresponds to difference; and (N)–(Q) divide the province of properties and accidents.

²⁰ It ‘produced formidable problems for the mediaevals, since it appears to confound any possibility of distinguishing between inseparable accidents and properties’ (de Libera, *Isagoge**, p. 61 n. 98; cf Ebert, ‘Akzidentzbegriff’, p. 342). But properties are easily distinguished from inseparable accidents—they form a subclass of inseparable accidents.

Elias says that Porphyry 'hints at the division in his remarks on genera' (*in Isag* 35.18): he is thinking of 2.22–3.14; and diligent dividers have always discovered the necessary materials in the text. But Porphyry himself does not mention a division; indeed, he scarcely hints at any systematic account of things. Perhaps he is offering not a system but a list: he discusses five—or five and a half—sorts of predication not because they form an exhaustive and exclusive set but because they have a certain salience—an historical salience, and perhaps also a logical or philosophical salience. At any rate, and whatever Porphyry's intention may have been, there is no system on the surface of the text. Why seek one beneath the surface?

ADDITIONAL NOTES

(A) Stoic influence on Porphyry?

In his *Geschichte der Logik*, Carl Prantl detected Stoic influence on the *Introduction*—and the fact that Porphyry mixed Stoic elements into his Aristotelianism was a chief reason for Prantl’s spluttering contempt for his work (pp. 626–632). Otto Rieth, in his learned and influential *Grundbegriffe der stoischen Ethik*, urged that ‘the Stoic theory of definition’ was an important source of Porphyrean ideas (pp. 177–179). More generally, Pierre Hadot argued that Porphyry transposed Stoic materialism into Platonic metaphysics, and identified a number of particular instances of the transposition (e.g. *Porphyre* I, pp. 289–293, 327–328, 485–488). Hadot’s thesis has found favour. In particular, Alain de Libera has followed him: he has added further illustrations of the thesis and has suggested that Porphyry got much of his Stoic information by way of Alexander of Aphrodisias (*Isagoge**, pp. xxvii–xxx); and he has asserted that ‘Stoic formulae are massively present in <*Isag*>. They show up on numerous occasions. Their sources differ, and are often indirect’ (‘Aristote et Plotin’, p. 13).

Porphyry certainly knew his Stoicism (note Simplicius, *in Cat* 2.7–9); and there is nothing inherently absurd in the thesis that he adopted various Stoic notions and doctrines—were there not Stoic doctrines in Plotinus’ writings (*v Plot* xiv 4–5)? Nonetheless, there are no significant traces of Stoicism in the *Introduction*.

(1) The Stoics ‘make a fourfold division into subjects [$\nu\piοκείμενα$], qualified items [$\piοιά$], items being in a certain way [$\piως \epsilon\chiοντα$], and items being in a certain way in relation to something [$\piρός τι \piως \epsilon\chiοντα$]’ (Plotinus, *enn* VI i.25.1–3)—these are the so-called Stoic ‘categories’ (texts in Hülser, *Dialektik*, pp. 1008–1040). In addition, the Stoics sometimes distinguished between $\tau\alpha \piρός \tauι$ and $\tau\alpha \piρός τι \piως \epsilon\chiοντα$ (see esp Simplicius, *in Cat* 165.32–166.32, with Mignucci, ‘Stoic notion’).

Porphyry’s use of ‘ $\piρός τι \piως \epsilon\chiειν$ ’ at 1.21 has been taken for a Stoicism; and his question ‘What is it like [$\pi\hat{ω}s \epsilon\chiει$]?’ has been connected with the Stoics since the time of Prantl (*Logik*, p. 629). Thus ‘although Porphyry’s explanation of the predicables is mostly in Aristotelian terms, his use of $\pi\hat{ω}s \epsilon\chiον$ (probably $\piως \epsilon\chiον$) is Stoic’

(Warren, *Isagoge**, p. 33 n. 24).¹ More imposingly, Porphyry's 'three questions' have been connected to the Stoic 'categories'; for the three questions are the result of a grouping of Aristotle's ten types of predication in accordance with principles suggested by the Stoic theory. Thus 'neither Aristotelian, in the sense of the *Categories*, nor Stoic, in the sense of the distinction among the four genera of bodies, Porphyry's theory of the three genera of predication' is an adaptation—direct or indirect—of these two distinct theories (de Libera, *Isagoge**, p. cxii). (Dexippus—perhaps relying on Porphyry—says that the Stoics 'put most of the <Aristotelian> predication into What is it like?' (in *Cat* 34.19–21). Plotinus had contended that the Stoic category 'perhaps will only fit the cases of position [*κείσθαι*] and possession [*ἔχειν*]' (en VI i.30.19–20). So perhaps Porphyry was not only following the Stoics but also cocking a snook at his master?)

This is all phantasy. There is nothing peculiarly Stoic in the expression 'πρός τι πως ᔁχειν' (above, p. 52 n. 9); and there is no reason to think of the Stoics at 1.21. Porphyry makes no distinction between τὰ πρός τι πως ᔁχοντα and τὰ πρός τι. The grammarians sometimes distinguish between πρός τι and πρός τι πως ᔁχον (e.g. Charisius, *inst gramm* II vi [156.4–9]; and earlier in PHeid Siegmann 198 [Wouters, *Grammatical Papyri*, p. 182]), and they also sometimes distinguish between πρός τι ᔁχον and ὡς πρός τι ᔁχον (e.g. Dionysius Thrax, 12 [35.3–4]; scholia to Dionysius Thrax, *GG* I iii 193.15–37; 235.9–36). None of this bears on Porphyry.

Again, there is no particular reason to associate Porphyry's question 'πῶς ᔁχει,' with the Stoic πως ᔁχοντα, nor to associate his 'system' of three questions—if such a system there was—with the four Stoic 'categories'. To be sure, the question 'πῶς ᔁχει,' is related to the indefinite expression 'πως ᔁχειν', and the question 'ποῦντις τι,' is related to the indefinite 'ποῦν'. But Porphyry's questions have no relation to the other two Stoic items, and the Stoic 'πως ᔁχειν' and 'ποῦν' get their particularly Stoic colouring from their association with those other items. It is wayward to postulate that Porphyry borrowed two of the four Stoic items, associated them with an Aristotelian item, and thus produced a new synthesis. Nothing in the Stoic texts could have

¹ But Warren also says that at 17.12 πως ᔁχον 'seems to correspond directly to the Aristotelian category of state or posture, *κείσθαι*' (*ibid.*). Similarly, de Libera finds a reference to τὰ πρός τι πως ᔁχοντα at 9.6—but an allusion to Aristotelian and Stoic ἔξις at 8.11–12 (*Isagoge**, pp. 56 and 55).

suggested such an intricate manoeuvre, and nothing in the Stoic texts sheds any light on Porphyry's 'system'.

(2) The philosophers 'delineate' genera (2.15). The verb 'ὑπογράφειν' and its associated noun 'ὑπογράφη' sometimes carry narrow or technical senses. In his account of Stoic philosophy, Diogenes Laertius reports that

a delineation is an account which introduces you in outline to the subject; or: a definition which gives the force of the definition in a more simple fashion. (VII 60; cf Suda, s.v. *ὅρος*)

It is often inferred that 'delineation', in the narrow sense, is a Stoic term—and that Porphyry has taken his terminology from the Stoics (see e.g. Rieth, *Grundbegriffe*, pp. 40–45; Strange, *Categories*, p. 38 n. 40—who refers to Galen, *diff puls* VIII 708, and [Galen], *def med* XIX 349, neither of which texts mentions the Stoics).

Perhaps the narrow or technical sense of 'ὑπογράφη' was formally introduced into philosophy by the Stoics—although no ancient text says that it was. Certainly, the sense is detectable in a few Stoic writings (e.g. Marcus Aurelius, III xi 1; PBerol inv 16545). But Gellius ascribes it generally to 'the Greeks' (I xxv 11), and by Porphyry's time it was part of the common baggage of the philosophers. Porphyry did not take it from the Stoics—or from anyone else.

(Rieth, *ibid*, pp. 176–177, and Strange, *ibid*, suggest that the narrow sense 'could have been suggested by some passages of Aristotle'. Thus the Stoics took some of their technical vocabulary from a close reading of Aristotle. The suggestion is exhilarating—but it was, alas, ordinary Greek usage, not any Aristotelian passage, which suggested the narrow sense.)

(3) Porphyry explains the notions of a 'most general item' and a 'most special item'. The terms 'γενικώτατον' and 'ειδικώτατον' were defined by the Stoics (Diogenes Laertius, VII 61); and de Libera infers 'Stoic sources' for Porphyry, declaring that Porphyry's account of most general items 'supposes the Stoic definition of γενικώτατον' (*Isagoge**, pp. xxviii–xix). He guesses Porphyry may have learned the term from Alexander (*ibid*, p. 46 n. 41; and, with elaboration, 'Aristote et Plotin', p. 14). The term is ubiquitous in imperial Greek; it has no particular connection with Stoicism; and Porphyry had no need to run to Alexander for it.

(4) Individuals are each constituted by a unique assemblage of proper features. The theory which Porphyry sketches at 7.19–27 recalls a familiar grammatical thesis:

A name [*ὄνομα*] is a part of speech which has cases and which signifies a body or an object (a body, e.g. stone; an object, e.g. education), and which is used both commonly and properly (commonly, e.g. man, horse; properly, e.g. Socrates). (Dionysius Thrax, 12 [24.2–6])

And again:

A name in the strict sense is one which signifies a proper substance, e.g. Homer, Socrates; an appellative name is one which signifies a common substance, e.g. man, horse. (ibid [33.6–34.2])

Hence later grammarians will say that a name ‘determines a common or a proper quality’.²

The grammarians’ distinction between proper name and common or appellative name is generally supposed to have been taken from the Stoic logicians.

An appellation, according to Diogenes <of Babylon> is a part of speech which signifies a common quality, e.g. man, horse; a name is a part of speech which indicates a proper quality, e.g. Diogenes, Socrates. (Diogenes Laertius, VII 58)

And just as the name ‘Socrates’ indicates a proper quality [*ἰδία ποιότης*], or a quality which resides in Socrates alone, so Socrates himself is described as ‘properly qualified [*ἰδίως ποιόν*]’. There are surprisingly few texts—and most of them jejune—which mention ‘proper qualities’ or ‘properly qualified’ in connection with Stoicism.³ Nonetheless, the idea was certainly Stoic, and probably Stoic in origin.

So here Stoicism has cast its shadow over the *Introduction*: Prantl speaks of Porphyry’s ‘wholly Stoic terminology’ (*Logik*, p. 628); and others have followed his lead (e.g. de Libera, *Isagoge**, p. xxviii; Chiaradonna, ‘Sostanza in Porfirio’, p. 60 n. 8).

² So Apollonius and Herodian (scholia to Dionysius Thrax, *GG* I iii 524.8–12; cf Priscian, *partit* V 95)—see e.g. Apollonius, *synt* II 22 [142.1–3]; and later e.g. Priscian, *inst* II 22 (‘*communis vel propria qualitas*’); XVII 63; *partit* I 22). According to the same scholium, Romanus and Philoponus later preferred ‘substance’ to ‘quality’ in the definitions; but Apollonius himself sometimes uses ‘substance’ (e.g. *pron* 27.9–10—cf e.g. Priscian, *inst* II 18; XVII 15, 63; PHeid Siegmann 198 [Wouters, *Grammatical Papyri*, pp. 178–179]), and in this particular context it is plain that ‘quality’ and ‘substance’ are taken to be synonyms.

³ See e.g. Alexander, in *APr* 179.11–13; Philoponus, in *APr* 167.17–19; P Oxy 3008; anon in *Th* LXIX 46–49; Stobaeus, *ecl* I xx 7 = Arius Didymus, *Phys* frag 27 = Posidonius, frag 96 (where Posidonius distinguishes between *τὸ ἴδιως ποιόν* and *οὐσία*—which is here the same as matter); Philo, *aet mund* 48. There are later and non-Stoic uses of ‘*ἴδιως ποιόν*’: e.g. Simplicius, in *Cat* 35.34; 229.16–18. For Latin versions see e.g. Cicero, *Luc* xviii 56 (*singularum rerum singulas proprietates*); Boethius, in *Int* 136.20–137.18 (*qualitas singularis, proprietas*); Priscian, *inst* XVII 70 (*propria qualitas*). On the Stoic question see Sedley, ‘Criterion of identity’; Lewis, ‘Stoics on identity’.

The Stoic theory might be put schematically like this: you grasp the meaning of a name N if and only if you know that N designates an item if and only if the item possesses P, where P is a property peculiar to the one item. For example, you understand 'Plato' when you know that 'Plato' designates an item if and only if that item is Plato or has *Platonitas*—a term for the invention of which Boethius excuses himself (*in Int²* 136.20–137.18). Porphyry's theory—if it is construed as an account of the meaning of singular terms—might be put schematically as follows: you grasp the meaning of an individual predicate I if and only if you know that I is true of an item if and only if each of E₁, E₂, . . ., E_n, is true of it, where each E_i marks the item off from some other item or items and the set of E_i's holds of the item alone. For example, you understand the individual predicate 'two' when you know that 'two' is true of an item if and only if both 'even' and 'prime' are true of it.

The two theories have their similarities. But the Stoic theory makes no mention of sets of proper features, and it concerns not individual predicates but proper names. Porphyry is not simply reporting the Stoic theory; and there is no cause to suppose that his theory was elaborated on the basis of the Stoic theory.

(5) The threefold sequence which Porphyry uses at 8.8—common, proper, most proper—has been fathered on the Stoics (see Rieth, *Grundbegriffe*, p. 184). After all, Simplicius explains that, according to the Stoics, a thing may move itself in three different ways—

that is to say, commonly . . .; in a different way . . .; more specially . . . (*in Cat* 306.25–27)

Again, Simplicius expounds a threefold distinction which the Stoics made among qualities: the third type of quality he describes as 'most special' (*ibid* 212.19–20). Again, Sextus notes that the Stoics found three senses in the term 'good': the third sense, he says, embraces the second, and the second the first (*M XI* 22–30; cf *PH III* 171).

In all these passages there is a threefold hierarchical distinction, and it is ascribed to the Stoics. But none of the texts uses the sequence 'common—proper—most proper'. (And, in the first text at least, Simplicius is describing the Stoic view in his own terms, not in theirs.) There is nothing characteristically Stoic about threefold hierarchies, and nothing at all Stoic about the threefold sequence of terms.

(6) Porphyry frequently talks about 'the more and the less' in terms of augmentation and diminution, 'ἐπίτασις' and 'ἀνεστις' (e.g. 9.17—above, p. 172). Solère, 'D'un commentaire', suggests that Porphyry

‘probably borrowed the terms from Stoic physics’ (p. 412 n. 2). The terms are used in Stoic physics—and in a dozen other contexts. If Porphyry ‘borrowed’ them from anywhere, then he borrowed them from musical theory (on which he was an expert). But it is absurd to speak of borrowing in the case of such ubiquitous terms.

(7) According to Hadot, ‘the Stoic doctrine of mixtures, i.e. of degrees of unity, . . . helped <Porphyry>, in the *Isagoge*, to give an account of the different modes of predication’—and gave similar help to anon, in *Parm XI 10–19* (*Porphyre I*, p. 130; cf pp. 203–204, 233–234). In particular, the Stoic contrast between $\sigmaύγχυσις$, which unites the parts of essence, and $\pi\alpha\rho\theta\epsilon\sigmaις$, which links subject to predicate, ‘illuminates certain expressions in Porphyry’s *Isagoge*’ (‘Commentaire sur le *Parménide*’, p. 423, referring to 12.25 and to *in Cat* 95.22). De Libera, *Isagoge**, p. xxviii, offers a variation on the theme: ‘the <Stoic> notion of ‘total mixture’ ($\sigmaύγχυσις$) explains the definition of an individual as an individual property resulting from the combination of common properties or qualities’.

The Stoic terms are not found in the *Introduction*, nor is there any covert allusion to them. The Stoic doctrine of mixtures has nothing to do with predication—and the distinction between essential and accidental predication is as Aristotelian as apple pie. As for individuals, the theory which Porphyry sketches is in some ways comparable to a Stoic theory; but the Stoic theory is not itself explained in terms of $\sigmaύγχυσις$ —and Porphyry’s language points away from rather than towards Stoicism.

(B) The Old Masters

At 1.8 and 15 Porphyry refers to the ‘old masters’. The term, ‘οἱ παλαιοί’ or ‘οἱ ἀρχαῖοι’ or some variant, is common in imperial texts, where it often contrasts with ‘οἱ νεώτεροι’—‘the recent men’. The sense of the term is clear and constant; but its reference varies from context to context and is sometimes vague. I list here the main Porphyrean examples. (For Galen and Alexander see Barnes, ‘Logical form’, pp. 71–73.)

(1) *abst*: II 4—οἱ παλαιοί followed by explicit references to Theophrastus (5, 7, 11, 20, 26) and to Theopompus (16); III 1—οἱ παλαιοί followed by references to Aristotle (7), Theophrastus (24) and Plutarch (18–24); but at III 3 οἱ παλαιοί contrast with οἱ ἐφ’ ἡμῶν καὶ τῶν πατέρων and at III 16 and IV 2, οἱ παλαιοί are men of the Golden Age.

(2) *de an*: 250 = Eusebius, *PE* XV xvi 2—*οἱ παλαιοί* include Aristotle and contrast with the Stoics.

(3) *an fac*: 251 = Stobaeus, *ecl* I xlix 24—*οἱ παλαιοί* contrast with Porphyry's own teachers and include Ariston of Chios (*ibid*), Numenius (252 = I xlix 25), 'the Academics' (*ibid*), the Stoics and Plato and Aristotle and Nicolaus of Damascus (253 = I xlix 25a).

(4) *ant nymph*: vague references to *οἱ παλαιοί* at 4, 5, 14, 18 (including Sophocles), 20 (*οἱ παλαιότατοι*); at 31 'the old philosophers and theologians' follows references to Plato, Pherecydes and Hesiod.

(5) *in Cat*: 120.12–17—*οἱ παλαιοί* are pre-Aristotelian philosophers; 127.13.

(6) *ad Gedal*: 53 = Simplicius, *in Cat* 36.28–29—*οἱ νεώτεροι* are Stoics, contrasted with Aristotle; 55 = Simplicius, *in Cat* 48.13–14—*οἱ πρεσβύτεροι* include Aristotle and contrast with the Stoics; 70 = Simplicius, *in Cat* 213.21—*οἱ ἀρχαῖοι* contrasted with Stoics; cf 66 = Simplicius, *in Cat* 159.31–33—'the *παλαιοί* exegetes of *Cat*' include Boethus, Ariston, Andronicus, Eudorus, Athenodorus (but here Simplicius is not quoting Porphyry).

(7) *in Int*: 78 = Boethius, *in Int*² 26.21–27.10—the *antiqui* are pre-Aristotelian.

(8) *in Ptol harm* is particularly rich: 4.3 (*οἱ πρεσβύτεροι* = Aristoxenus); 4.11, 20 (*οἱ παλαιοί* = those earlier than Ptolemy); 5.9; 11.5, 33; 13.13; 17.15, 29; 18.1; 24.19 (quoting Ptolemy, *synt* IX 12); 45.19, 22 (Plato and Aristotle); 55.32 and 58.2 (Pythagoras and Archytas); 65.24; 92.12 (*οἱ ἀρχαῖοι* include Plato, Demetrius, Panaetius, Archytas, Eratosthenes, Euclid, Diodorus, Dionysius of Halicarnassus); 113.29; 114.1, 25; 130.32 and 137.13 (*οἱ νεώτεροι* are later than Aristoxenus but earlier than Ptolemy); 162.19; 168.26; 171.4; 174.10.

(9) *in Ptol tetr*: xxx [206.4–5]; xli [211.24–25]; and esp xli [212.7–26]—the old masters are pre-Ptolemaic astrologers, 'the moderns' are Ptolemy and his contemporaries.

(10) *quaest Hom*: xvi [115.25–27]—*οἱ παλαιοί* include Homer and probably exclude Aristotle.

(11) *sent*: 20—*οἱ ἀρχαῖοι* = Plato; 38—*οἱ παλαιοί* = Plato; 42.

(12) *de Styge*: 372 = Stobaeus, *ecl* II i 32—*πάντες οἱ παλαιοί* who have talked about the Gods—they include Homer.

(13) And also e.g. frag 467 = John Lydus, *mens* 71.7–14—where *οἱ παλαιοί* are probably Pythagoreans.

Plotinus frequently refers to *οἱ παλαιοί* or *οἱ ἀρχαῖοι*: in the great majority of cases where a specific reference is discernible, he has Plato

in mind; once at least (*enn* VI iii 28.9) the reference is to Aristotle; at VI i 30.31 the old men are the Presocratics (but this picks up VI i 1.2, where Plotinus writes, more precisely, ‘οἱ πάνυ παλαιοί’). In Dexippus *οἱ ἀρχαῖοι* at *in Cat* 9.23 include Aristotle (cf 9.27); and at 22.19–20 Dexippus says that ‘Aristotle was older [sc than the Stoics] and followed the linguistic usage of οἱ πρεσβύτεροι’ (cf 23.26 where *οἱ πρεσβύτεροι* contrast with the Stoics). On the other hand, at 39–1–2, *οἱ παλαιοί* are pre-Plotinian critics of the *Categories*, and at 49.9 they are pre-Plotinian defenders of Aristotle against such critics. For Iamblichus, *οἱ ἀρχαῖοι* may include Aristotle, in contrast with the Stoics (*apud* Simplicius, *in Cat* 307.9; cf 394.13–14), and *οἱ παλαιοί* may include the Pythagoreans and exclude Aristotle (*ibid* 351.6–8).

For Proclus, *οἱ παλαιοί* include Plotinus, Longinus, and Porphyry himself (*in Tim* I 322.20–24 = Porphyry, *in Tim* frag 43).

(C) Talking of expressions

Predicates are expressions, and to talk about predicates is to talk about expressions. In order to talk about expressions it is useful to have some names, or other singular terms, by which to refer to individual expressions or types of expression. There is nothing exoteric about any of that—

after all, words too are entities, and we distinguish them from one another (as we do other items) by names, signifying one by one name and another by another. (Ammonius, *in Int* 51.15–17)

One modern way of making names for words uses inverted commas: if I want to refer to my cat, I use his name; if I want to refer to his name, I take the name and surround it with inverted commas, thus: ‘Ratty’ has two syllables.

The Greeks did not have inverted commas; but they had other devices for making names for words and expressions, among them the definite article. According to Apollonius Dyscolus, the article

is used with every part of speech, when it signifies nothing other than the name of the word. Hence the article goes with something understood from outside. For example, in

οἱ μέν προτακτικός ἐστι τοῦ δέ

the article refers to ‘connector’. (*synt* I 37 [34.5–8]

That is to say, ‘*ό μέν*’ means ‘the <connector> *μέν*’. Similarly, ‘*τὸ λέγε*’ is short for ‘*τὸ λέγε ρῆμα*’ and means ‘the verb *λέγε*’ (*ibid*, 34.9). Ammonius’ illustrative examples of names for words make the ‘something understood’ explicit; and he talks of ‘the conjunction *μέν*’, ‘the article *τό*’, ‘the meaningless word *κνάξ*’ (*in Int* 51.19–20).

Frequently, the neuter singular of the article is used, ‘*τὸ X*’ being a way of designating the expression ‘X’. Sometimes, the feminine singular is found: ‘*ἡ X*’. Now ‘*ἡ X*’ is evidently short for ‘*ἡ X φωνή*’ or ‘*ἡ X πρότασις*’—‘the expression X’ or ‘the sentence X’. And according to Apollonius, ‘*τὸ X*’ is similarly short for ‘*τὸ X ὄνομα*’ or ‘*τὸ X ρῆμα*’. No doubt this use of ‘*τὸ X*’ originated in such a manner; but it soon gained its independence, and there are numerous texts in which neither ‘*ὄνομα*’ nor ‘*ρῆμα*’ nor any other noun can be understood—Aristotle, *Met* 1017a28–30, for example; and in Apollonius himself—*pron* 7.4; 8.5, 20; 10.13, 18, 22, etc.⁴

Porphyry notices this use of the definite article:

‘name’ is not used only of items which have a properly nominal character and are prefixed by articles: it is applied to every part of speech—for if we ask whether any expression is homonymous, we use it with an article prefixed . . . (*in Cat* 62.1–4; cf Simplicius, *in Cat* 25.20–24).

And Porphyry often uses ‘*τὸ X*’ in this way: e.g. *in Cat* 55.24; 56.5, 11; 57.33; 58.2; 61.32; 62.7, 15, 17; 63.13, 17, 32, etc.

If the expression which replaces ‘X’ in ‘*τὸ X*’ is a neuter singular noun, then an ambiguity introduces itself: ‘*τὸ ζῷον*’, for example, means either ‘the animal’ or ‘the word animal’. Moreover, when X is a noun and has a gender, authors will sometimes use the article not in the neuter but in the gender of X itself. Thus when Alexander says, of earlier logicians,

they also use proslepsis [*τῇ προσλήψει*] for metalepsis [*ἀντὶ τῆς μεταλήψεως*] (*in APr* 264.5–6)

he is commenting on their terminology—they use ‘*πρόσληψις*’ in the sense of ‘*μετάληψις*’. And there is a striking passage in Aristotle: at *Int* 16a14–16 ‘*τὸ ἀνθρωπός*’ is followed by ‘*ό τραγέλαφος*’—and in each case Aristotle means to refer to a noun. For Porphyry, see e.g. *in Cat* 69.26–27, or 70.5–6.

⁴ Note also the occasional use of the plural ‘*τὰ X καὶ Y*’ to designate the expressions X and Y: e.g. Simplicius, *in Cat* 197.24 (cf Aristotle, *Top* 106b31—but the text is dubious).

There were other ancient devices for naming expressions,⁵ but the commonest way to refer to a word was—and still is—to use the expression itself ‘autonomously’. When Dionysius Thrax remarks that

names . . . are both common and proper: common, e.g. man, horse; proper, e.g. Socrates, (12 [24.3-6])

the word ‘man’ designates the word ‘man’, and the word ‘Socrates’ designates the name ‘Socrates’. There is a nice example at Sextus, *PH* I 216, where the case of the word ‘χρήματων’ shows that it must be taken to refer to an expression. There are several examples in Porphyry: *v* *Pythag* 51; *in Cat* 60.16; 62.35; 63.1-2, 15, 16-17, etc. Aristotle has the phenomenon in mind when he observes that ‘man and white are each both a thing and a name’ (*SEL* 174a8-9): ‘man’ designates both a rational animal and the word ‘man’; ‘white’ designates both a colour and the word ‘white’. Autonymy dismays logical purists and enemies of systematic ambiguity. But it is rarely misleading. When Porphyry suggests that perhaps the word ‘σωφρόνει’ should be understood in the sense of ‘σῶζε τὴν φρόνησιν’, he writes:

ἀλλὰ μήποτε σωφρόνει ἔνεστιν ἀκούσαι λέγοντος ἀντὶ τοῦ σῶζε τὴν φρόνησιν (scire te ipsum 274 = Stobaeus, *ecl* III xx1 27)

The second reference is done by way of a neuter article, the first autonomously: readers do not scratch their heads.⁶

Autonymy is the rule when you speak (only philosophers waggle their forefingers to imitate inverted commas), and autonymy is normal in non-philosophical writing (inverted commas are a sign of pedantry). Phrases of the form ‘the word X’ or ‘the verb X’ are as familiar in English as their counterparts are in Greek. If these phrases are deemed to be parallel to, say, ‘the poet Shelley’ or ‘the river Thames’, then in them ‘X’ is used autonomously—and pedants will write ‘the name “Shelley”’ rather than ‘the name Shelley’. (But perhaps such phrases are better compared to, say, ‘the sign ?’.)

As for the formula ‘τὸ X’, it will seem that in it the definite article functions exactly like a pair of modern inverted commas. And indeed,

⁵ Note also the use of ‘ὅτι’ (followed by a sentence) to introduce *oratio recta* rather than *oratio obliqua*: e.g. *in Cat* 64.12; 76.16; and in Plato (e.g. *Crito* 50c; *Phdr* 268a)—and earlier (e.g. Thucydides, I 137.4; VIII 53.3).

⁶ The Greek grammarians talk all the time of expressions. Of the first hundred such references in Apollonius, *adv*, 50 are of the form ‘τὸ X’, 40 are ‘autonomous’, the remainder of the form ‘δ/η X σύνδεσμος/φωνή etc’.

it has been inferred that the ancients did after all have inverted commas: they did not write them as we do, and their use imported occasional ambiguities—on the other hand, the ancient inverted commas can be said aloud. But that is not how Apollonius and Porphyry saw the matter. Their view was rather this: In the sentence

The dog [$\delta\kappa\nu\omega\nu$] has a bone,

it is the noun ‘dog [$\kappa\nu\omega\nu$]’ and not the phrase ‘the dog [$\delta\kappa\nu\omega\nu$]’ which is a name. In the same way, in

$\tau\delta\kappa\nu\omega\nu$ [the dog] has two syllables

‘ $\kappa\nu\omega\nu$ [dog]’ and not ‘ $\tau\delta\kappa\nu\omega\nu$ [the dog]’ is a name—and a name, now, for an expression rather than for an animal.

(D) Simple predicates

Porphyry contrasts ‘simple’ expressions with expressions used ‘in accordance with an interweaving [$\kappa\alpha\tau\delta\sigma\mu\pi\lambda\omega\kappa\gamma\nu$]’, adding that there are two varieties of interweaving: one, when two words are joined by a conjunctive connector (for example, ‘Socrates and Plato’), and the other when words are put together into a sentence (*in Cat* 70.31–71.15). The second variety bears on Aristotle, *Cat* 1a16–19, and makes a contrast between single words and sentences. In this sense, no terms are interwoven—as Simplicius says, every sentence involves interweaving and all other expressions are simple (*in Cat* 404.10–13).

The first variety of interweaving is conjunction or conjoining.⁷ It is connected with a passage in the *Prior Analytics*:

That this holds of that, and that this is true of that, are to be taken in as many ways as the predicates have been divided—and either with qualification or without, and again either simple or conjoined. Similarly with not holding. Look into this and determine it better. (*APr* 49a6–10)⁸

⁷ ‘ $\sigma\mu\pi\lambda\omega\kappa\gamma$ ’ and its relatives are the standard words for conjunction in later Greek logic.

⁸ See also *Top* 148b23: ‘If a definition has been given of a conjoined item . . .’: ‘conjoined [$\sigma\mu\pi\epsilon\pi\lambda\epsilon\gamma\mu\epsilon\nu\omega\nu$]’ is synonymous with ‘compound [$\sigma\bar{\nu}\theta\epsilon\tau\omega\nu$]’ at 148b32; and—note the example: ‘finite straight line’—it is evident that the conjoined item is not a sentence but a predicate. See also *Phys* 195b10–12 = *Met* 1014a13–15: ‘Polyclitus the sculptor’ an example of a $\sigma\mu\pi\lambda\epsilon\kappa\mu\epsilon\nu\omega\nu$.

Alexander comments that Aristotle actually ‘looked into this’ in the *de Int*, and he adds that ‘Theophrastus speaks about it at greater length in his *On Affirmation*’ (in *APr* 367.12–14 = Theophrastus, frag 88). But in *Int* Aristotle says nothing to our purpose (Alexander has 20b31–21a33 in mind); and of Theophrastus’ reflections we know nothing apart from Alexander’s reference.

But Alexander himself has something to say on the subject:

Again, an item will be predicated either simply and without composition . . . or else conjoined and composite. Thus

Socrates is a man

has a simple predicate, but

Socrates is a white man

and

Socrates talks while sitting down

have compound or composite predicates (*ibid* 367.3–7).⁹

What makes a term compound or conjoined? Porphyry mentions the presence of a conjunctive connector—‘Socrates and Plato’, ‘old and grey’; but he surely did not intend to limit compound terms to explicit conjunctions. For Boethius, in a passage taken from Porphyry, states that ‘Socrates the bald philosopher walks’ and ‘Musical Socrates is pale’ are not one sentence each but two inasmuch as they contain a compound subject term.¹⁰ No doubt Porphyry would say the same about ‘Socrates is a white man’, where the predicate rather than the subject is complex. Such things, he presumably thought, are covert conjunctions; and a term may be conjoined even if it does not contain an explicit conjunctive connector.

Even so, such an account of compound terms seems too restrictive. ‘lover of Puccini’s operas’, for example, is not a covert conjunction; yet it will surely be classified as a compound predicate. According to Plotinus,

⁹ When Ammonius, in *Int* 14.2–11, distinguishes between simple and composite ($\sigmaύνθετος$) predicates he gives ‘dead man’ and ‘counterfeit coin’ as examples of composite predicates: on his view, ‘white man’ is not a composite predicate—rather, it is two predicates juxtaposed.

¹⁰ in *Int²* 352.18–27; 367.21–22; see 354.25–29 for the attribution to Porphyry, and 356.23–29 for the rule which determines whether an item is one proposition or not.—Other examples at *ibid* 152.9–24; 218.26–219.7.

you should take as a quantity not three oxen but rather their number—for three oxen are thereby two predicates. In the same way, a line thus long is two predicates, and a surface thus large is two. (*enn* VI i 4.17–20)

In

This line is two feet long

there are two predicates, not one—a predicate of quantity ('two feet'), and a predicate of quality ('long'). The two predicates are conjoined; but the complex predicate 'two feet long' is not equivalent to the conjunction of the two simple predicates.

This suggests something like the following account: (i) A predicate is simple if and only if it is not compound. (ii) A predicate is compound if and only if it contains, as a proper part, an expression which may itself function as a predicate. Thus 'old and grey', 'white man', 'two feet long', 'slow worker', 'non-smoker', etc will all count as compound predicates.

There is a complication. In the course of discussing predicative simplicity (*in Cat* 71.10–72.5), Simplicius urges that complexity is not a matter of 'expression' but of 'force and meaning' (*ibid* 71.11).¹¹ A term may be composite in expression and yet simple in meaning, and a simple expression may present a compound term. Earlier Simplicius had remarked that

when the object and the thought is one, then what is said is one and without conjunction, even if the expression is several—as in the case of 'well-wisher' or 'Newcastle' (for what is meant is one). When the objects and the thoughts are several, then even if the expression is one we shall say that they involve conjunction . . . (*ibid* 43.20–25)¹²

Not that it is easy to say when 'the object and the thought are one':

Some items co-indicate [*συνεμφαίνει*] something but not something referred to a predication of its own—like 'οὐτός' and 'αὕτη', for the one means male and the other female, but not a conjunction of genera. (*ibid* 360.28–30)

Thus 'περιπατεῖ' is simple, even though it co-indicates time and person; and 'Ἄθηνησι' is simple even if it means 'is at Athens' (*ibid* 360.30–361.6—the latter point against Plotinus, *enn* VI i 14.9–17).

¹¹ Contrast a scholium to Dionysius Thrax: 'The simple items are prior to the compound—thus 'σοφός', which is simple, is prior to 'φιλόσοφος', which is compound. Syntax is prior to meaning; for it is by way of the syntax and composition of the expressions that the clarity of the meaning is born' (GG I iii 114.8–12).

¹² Cf *ibid*, 358.16–18; 437.18–26 ('carries arms [*ώπλισται*] is simple, 'contains wine' is complex).

This is at bottom Porphyrean. For according to Boethius, who is paraphrasing Porphyry,

a diction [*dictio*] is a simple name or a simple verb or a compound of the two items—as when I say Socrates, or again walks, or horse-breeding. (Porphyry, *in Int* 90 = Boethius, *in Int*² 85.25–28)

On the other hand,

were I to say: In the Lyceum Socrates together with Plato and other pupils argued, then the part of the remark which is In the Lyceum Socrates together with Plato and other pupils is itself too a diction—but not as a simple name or verb, nor as an affirmation, but rather as an incomplete remark composed of verbs and names. (ibid, 86.19–25)

And Boethius then distinguishes between a simple and a unitary expression:

If an expression means a unitary thing, it is unitary; if several things, it is plural. Simple and compound expressions, on the other hand, are determined not by what they mean but by the terms and dictions which are taken in the propositions. An expression is simple if it consists of only two terms, e.g. A man lives. . . . It is compound if it pronounces more than two terms, e.g. Plato the philosopher walks in the Lyceum. (Porphyry, *in Int* 93a = ibid 107.8–20)

So ‘rational mortal animal’ is simple, despite its complex form, because it signifies a unitary item, namely man. On the other hand, ‘rabbit’ (in one of its senses) is compound, despite its form; for it signifies an unco-ordinated item, namely an incompetent batsman.

How, then, are unitary items to be distinguished from fractured ones? The question is a standing issue in Aristotelian metaphysics; and far too deep for the *Introduction*—or for a commentary upon it.

(E) Singular predicates

Aristotle says that Cleon and Callias ‘are not truly predicated universally of anything else’, and that they ‘are not predicated of anything except accidentally’ (*APr* 43a26, 34–35). He is sometimes taken to mean that such items are not predicates at all. And the interpretation has its charm—after all, ‘Socrates’ is surely a proper name and not a predicate; and elsewhere Aristotle explicitly says that

in general, individuals and items one in number are said of no subject. (*Cat* 1b6–7; cf 3a36–37)

Numerous ancient texts echo the sound. Thus Simplicius:

Individuals participate in what is above them and for this reason are subjects for them; but, being more whole-like, they are not participated in by anything and for this reason are not predicated of anything. (*in Cat* 17.22–24)

And Dexippus:

Since <an individual substance> is indivisible into species, it is not said of any subject. (*in Cat* 43.19–20).

And Porphyry says that ‘particulars, being individual, are not said of a subject’ (*in Cat* 76.3–4), and that ‘individuals are not predicated of anything’ (*ibid* 89.5–6; 96.24).

Yet at 2.17–18 individuals are said to be predicated; and the same view can be found throughout the Peripatetic tradition, from Alexander (e.g. *in Met* 377.14) to Boethius (e.g. *in Int*¹ 82.27–83.1).

Simplicius explains the apparent contradiction:

Individuals are said of no subject—for there is nothing more particular than they are of which they will be predicated as of a subject. But if the name of Socrates is predicated of Socrates himself as subject for it, that is not the sort of predication we are talking about—rather our concern is with the synonymous predication of one thing of another, and this does not hold of individuals. (*in Cat* 51.13–18)

And a passage from Porphyry himself, though textually uncertain, conveys a similar message:

Individual substances, since they are not said synonymously of a subject, are not predicated of anything—for they have no other subject, and being predicated of a subject is being predicated synonymously of a subject. (*in Cat* 94.37–95.3)

Individuals are predicated; but they are not predicated synonymously of a subject, nor are they predicated of a subject distinct from themselves.¹³

A term X is predicated synonymously of Y if and only if the definition of X is true of what Y is true of. ‘That man is Socrates’ is not a synonymous predication inasmuch as the definition of ‘Socrates’ is not true of that man. Why not? Individual items are not definable: the definition of ‘Socrates’ is not true of that man because ‘Socrates’ has no

¹³ Chiaradonna, ‘Sostanza in Porfirio’, p. 60 n. 8, thinks that ‘Porphyry’s position cannot be identified with Aristotle’s, above all because Porphyry does not take individuals to be simple and ultimate subjects of predication (cf Aristotle, *APr* 43a2 ff.) but also as items predicated of a single object’. Porphyry surely thought that he was repeating Aristotle’s position; and he was.

definition. Synonymous predication will return in a later context.¹⁴ Here let it be noted that, according to Peripatetic theory, a sentence such as ‘Socrates walks’ does not exhibit synonymous predication (e.g. Simplicius, *in Cat* 52.16–18). Thus to deny that individuals are synonymously predicated is not to banish them from the company of honest predicates.

But there is a difference between ‘That man is Socrates’ and ‘Socrates walks’: in the latter, the predicate is distinct from the subject, in the former it is not:

Individuals are not predicated of other items—just as no other items are predicated of the highest genera. (Ammonius, *in Int* 169.9–10)

An individual is predicated of one thing only, namely of itself (just as only one thing, namely itself, can be predicated of a highest genus).¹⁵ There are metaphysical marshes here. If we are to remain on *terra firma* we shall say this: if X is predicated individually of Y, then X and Y are true of the same one item.

Another view of individual predication may be mentioned. It took its start from a problem set by Aristotle’s *Categories*: secondary substances are predicated of primary substances—for example, man is predicated of this particular man (1b10); but in that case what is the difference between subject and predicate? Plotinus said that there is no difference:

When I predicate man of Socrates, it is not like when I say that the wood is white but rather the white is white. For in saying that Socrates is a man I say that a particular man is a man, I say man of the man Socrates; and this is the same thing as saying that Socrates is Socrates. (*enn VI iii* 5.18–22)

In

Socrates is a man

the predicate refers to one particular man (namely Socrates). Hence the predicate ‘man’ (in some of its uses) is true of just one item.

Simplicius seems to ascribe the Plotinian view, or a variant upon it, to Porphyry:

¹⁴ See Additional Note (N).

¹⁵ In addition, individuals are predicated ‘unnaturally’ (e.g. Alexander, *in APr* 291.2–4): ‘Socrates walks’ is non-synonymous but natural; ‘The walker is Socrates’ is non-synonymous and non-natural. (What of ‘Hesperus is Phosphorus’?) On ‘natural’ predication see e.g. Alexander, *in Met* 371.7–8; 376.18–20; Ammonius, *in Int* 207.11–14; cf Barnes, *Posterior Analytics*, pp. 114–117.

Porphyry says that the conception of animal is twofold, one of the assigned and one of the unassigned; now the unassigned is predicated of the assigned, and in that way is diverse from it. (*in Cat* 53.6–9)¹⁶

And at rather more length:

If—they say—secondary substances are said of a subject, then they will be in another item—namely that of which they are said. Or is that not so? For ‘in a subject’ and ‘of a subject’ are not said in the same way. Rather, the unassigned is predicated of the assigned; for to say that a certain man is a man is no different from saying that Socrates is Socrates; so in a way man is said of himself and will neither be predicated of something else nor be in something else. This is how Porphyry solves the problem. (*ibid* 79.23–29)

That is to say—or so it seems—Porphyry adopts Plotinus’ view of the matter.

And Simplicius not implausibly rejects the view:

When we say that Socrates is a man and an animal, then if we say it as itself about itself, then the individual and the species and the genus will be the same, and such a predication will be pointless; but if we predicate it as species or genus of the individual, we shall predicate either the completable or the separate of the individual—and neither of these is the individual. (*ibid* 79.30–80.4)

Suppose I say that Socrates is a man, which man am I predicing of Socrates? Plotinus thinks that the man had better be Socrates himself—for certainly no other man is Socrates. Simplicius insists that the man is the species man and not any individual.

Did Porphyry follow Plotinus? The distinction between the ‘assigned [*κατατεταγμένος*]’ and the ‘unassigned [*ἀκατάτακτος*]’ universal, which had some currency among late Platonists, goes back at least to him: Simplicius does not, strictly speaking, state that Porphyry had used the terms, and they occur for the first time in Dexippus (*in Cat* 26.8–12); but it is a safe bet that they come from Porphyry.

And the matter which the terms designate was old—indeed, it comes in Plato, and in a passage in the *Phaedo* (102BD) where Plato distinguishes tallness ‘in us’ from tallness in itself. An assigned universal is the universal ‘in us’, an unassigned universal is the universal in itself. Such items are not Platonic eccentricities: they are also found in the Peripatetic world. Thus, according to Alexander,

¹⁶ Cf Porphyry, *in Cat* 75.5–6 (quoted above, p. 51).

it is not the case that, if you suppose a man to change into a horse, the animal in the man, remaining numerically the same, becomes a horse, changing in respect of some affection. (*in Top* 354.2–4)

And elsewhere Alexander casually refers to ‘the animal in Socrates’ (*quaest ii* 28 [78.15–16, 34–35]), or remarks that ‘the perceptive animate substance in Alexander is destroyed if Alexander dies today’ (*in Top* 355.16–17).

Later, Syrianus explains the point as clearly as anyone does:

If someone says that the universal is in the more special items, then he is thinking of the assigned universal, which is part of the subject, not of the unassigned, which is predicated of the whole species. (Syrianus, *in Met* 95.10–13)¹⁷

In

This man is late

‘man’ designates the assigned universal—it refers to the man in us. In

Man is capable of laughter

‘man’ designates the unassigned universal—for the sentence predicates something of the species as a whole. And in

Socrates is a man,

what does ‘man’ designate? Simplicius says that, in Porphyry’s view, it designates the unassigned species, so that the sentence predicates the unassigned species of the assigned, predicates ‘man’ of ‘this man’. Now perhaps, on Porphyry’s understanding, ‘in a way man is said of himself’—but evidently there is a world of difference between that understanding and the Plotinian thesis that ‘Socrates is a man’ is no different from ‘Socrates is Socrates’.

(F) ‘Being is not a genus’

The classic argument for the thesis that ‘being is not a genus’ is set out in Book *B* of the *Metaphysics*:

¹⁷ Cf *ibid* 98.33–99.1; Hermias, *in Phdr* 172.14–16 (‘the assigned species is in the singulars’); Asclepius, *in Met* 189.26–29; Simplicius, *in Cat* 56.1–4 (above, p. 103); 69.21–24; 119.21–24; note also the transferred use of the terms at *ibid* 27.23–29; Ammonius, *in Int* 232.15–17). See e.g. Lloyd, *Anatomy*, pp. 62–68; de Libera, *Isagoge**, pp. LXXVI–LXXIX; Chiaradonna, ‘Essence et prédication’, pp. 591–595.

It is not possible that there is a single genus of existents—neither unity nor existence. For the differences of each genus must exist and each of them must be one; but it is impossible to predicate either the species of a genus or their own differences or a genus without its species, so that if unity or existence is a genus, no difference will exist or be one. (998b22–27)

The argument—which is easily adapted to any proposed candidate for the post of supreme genus—invokes two principles, both of which are also found in the *Topics* (144a31–b12).

- (P1) A species is not predicated of its constitutive differences.
- (P2) A genus is not predicated of its divisive differences taken apart from its species.

Only (P2) contributes to Aristotle's argument.¹⁸

At first blush, (P2) seems to imply that if, say, rational is a difference of the genus animal, then animal is not predicated of rational—that is to say, it is not the case that all rational items are animals. But

a genus is predicated of the differences of its species, and rightly so. For since the differences inform the species, then since the difference is predicated of the species it follows that it is said also of those items which make the substance and form of the species. Hence the genus is predicated of the differences too—and not just of one but of several; for what is rational is said to be an animal, and again what is irrational is said to be an animal. (Boethius, *in Isag*² 287.12–19)

Boethius attributes the view to Porphyry (*ibid* 289.5–8). The ascription is debatable;¹⁹ but there seems to be no reason why some genera should not be predicated of their differences.

However that may be, in the *Topics* Aristotle offers an argument in favour of (P2), thus:

Again, if the genus is predicated of the difference, you have not given a definition. For it is thought that a genus is predicated not of the difference but of the items of which the difference is predicated—e.g. animal of man, of ox, and of the other land animals, but not of the difference itself which is said of the species. For if animal is predicated of each difference, then several animals will be predicated of the species—for the differences are predicated of the species. Again, every difference will be either a species or an individual if it is an animal—for every animal is either a species or an individual. (144a31–b3)

¹⁸ But Shields, *Order in Multiplicity*, pp. 247–259, finds two arguments in the text, one based on (P1) and the other on (P2). His interpretation of *Top* 144a31–b3 is also different from the one given below.

¹⁹ See above, p. 182, 246.

If a genus is predicated of its differences, two absurdities allegedly follow.

The first of them is explained by Alexander:

If the genus is predicated of each of its differences, e.g. animal of footed and of biped, then since that of which animal is predicated in answer to 'What is it?' is an animal, the footed will be an animal and also the biped. So if man is a footed biped animal, animal will be predicated of him several times and hence a man will be several animals—which is absurd. (*in Top* 452.6–11; cf *diff spec* 5–6)

But a man will not be several animals: he will be an animal in virtue of being footed, and also an animal in virtue of being biped—and what is absurd about that?

The second absurdity is this: the bipeds will be either a species of animals or else individual animals. To be sure, bipeds will not constitute a species insofar as 'biped' is not an appropriate answer to 'What is it?'. But each biped will be an individual animal—and what is odd about that?

But these remarks ignore a crucial fact: (P2) urges not that a genus is not predicated of its differences but that a genus is not predicated of its differences without its species. That dark saying is illuminated by a passage from Alexander:

Nor are genera predicated of their own differences—when the differences are taken apart from the species and the species are not included in them. For when animal is predicated of rational, it is predicated of rational animal (in this case, this is understood from 'rational'), since of the difference taken in itself without the species, i.e. of rationality, it is not predicated. For differences are qualities, and how could you predicate of them animal, which signifies a composite substance? (*in Met* 205.28–206.1)

Animal may be predicated of rational—that is to say, all rational items are animals. But there the difference is taken together with the species. The difference taken alone is rationality; and animal is not predicated of rationality—rationality is not an animal.

There are some problems with Alexander's view; but it at least allows the Aristotelian argument to take off. Aristotle assumes that any difference must exist. That is to say:

Existence is predicated of every difference.

Then suppose that existence is a genus. By (P2), existence will not be predicated of its own differences. Hence

There is some difference of which existence is not predicated.

The supposition thus yields a contradiction—hence it must be rejected, and existence is not a genus.

The argument may be generalized. Suppose that there is some supreme genus, G. Then

G is predicated of everything.

Hence

For any difference X, G is predicated of X.

Hence

G is predicated of its own differences.

But by (P₂)

G is not predicated of its own differences.

Again, a contradiction.

The argument is as good as the principle on which it rests. Certainly, genera are not always predicated of their differences ‘without their species’—rationality is not an animal. But what of existence? Suppose that existents form a genus, that they divide into substances and accidents, and that the specific difference of substances is self-subsistence. Then the genus applies to its own differences so that

Existence is predicated of self-subsistence,

or,

Self-subsistence exists.

Is that absurd? or at least false? Surely not: it is harmlessly true, true if and only if

Some self-subsistent items exist.

Some commentators have seen an allusion to the argument of *Met* 998b22–27 at 6.6; and in any event, Porphyry surely knew the argument. There is another argument which must have been equally familiar to him. It turns on the principle that there cannot be a genus covering items which are ranked or form an ordered series.²⁰ This principle is

²⁰ On the principle see Lloyd, ‘Ordered series’; *Anatomy*, pp. 76–85.

sometimes conflated with the principle that an ambiguous term—and in particular, a term with focal meaning—is not predicated generally of everything of which it is true.²¹ Thus Alexander (?), *quaest* iv 8, urges that virtue is not a genus: his argument is officially based on the principle to do with ordered series (128.4–5), but the text swiftly slides into focal meaning:

Where there is a first and a second, such that if the first is removed, the common item and all the other items after it are removed, such things are among those so called in several ways, being so called from one item or in relation to one item. (128.12–15)

Nonetheless, the principles are perfectly distinct: after all, the principle for ordered series applies to the natural numbers—and it would be absurd to imagine that the term ‘number’ had a different sense in ‘2 is a number’, ‘3 is a number’, etc. The argument based on ordered series makes no appeal to focal meaning.

The principle for ordered series is Aristotelian. It is often detected at *Metaphysics*, 999a6–16; it is pretty certainly to be found at *de Anima*, 414b20–33; and it is presented in the *Politics*:

we should not forget that of objects where the subjects differ in species and one is first, one second, one next, either there is nothing common at all or else scarcely anything. (1275a34–38)

Hence citizens do not form a genus or kind of person. But the best text is in the *Categories*:

Items co-divided with one another from the same genus are said to be simultaneous by nature. Items are said to be co-divided with one another when they are produced by the same division. (14b33–35)

Suppose that X and Y are species of some genus, and species at the same level. Then X and Y are ‘simultaneous’; that is to say, neither is prior to the other—they do not form an ordered series.

The principle flourished among the Peripatetics. Here is a typical text from Alexander:

Where there is an order, and a first and a later among the subordinated items in such a way that the first appears in the later, in such cases what is predicated in common of them is not predicated of them as a genus; for in genera,

²¹ For this principle, and the argument which it grounds, see above, pp. 119–124.

the proximate species are divided on the same level as one another, and it is not the case that one of them is first and another later. (*in APr* 10.30–11.3)²²

So, in particular, affirmation and negation are not two species of proposition—for affirmation is prior to negation.²³

The principle might also be deemed Platonic—after all, Plato had refused to posit a Form for ordered series (so that there is no Form of number, say: Aristotle, *EN* 1096b17–19), and Platonic Forms are nothing more than celestial genera. So the principle was accepted by Plotinus:

It is not possible for one thing to be prior and another posterior in the same genus; for the posterior takes its being from the prior, whereas of things in the same genus, each takes its being equally from the genus—if a genus must be that which is predicated of the species in answer to ‘What is it?’. (*enn* VI i 25.16–21; cf iii 9.40–42; 13.9–15)

It was accepted by numerous later Platonists.²⁴ And here is a very late text:

John the Geometer says that rhetoric is not divided into forensic, political and panegyrical as a genus into species because among these items there is a first and a second . . . whereas species must be of the same rank. (John Doxopatres, *in Aphth progymn* 131.3–6)

The principle is cited by the commentators on the *Introduction* (e.g. David, *in Isag* 155.22–24; [Elias], *in Isag* xx 21; xxi 2). It is pertinent inasmuch as existents form an ordered series; for existents fall into ten highest genera and these genera are not simultaneous—substance is prior to the accidents which the other nine genera contain:

²² Cf e.g. *in Met* 81.5–7; 208.31–209.22 ('where there is prior and posterior, what is predicated of them in common as a genus is nothing apart from the items of which it is predicated'—number and shape, for example); *quaest* I xib [23.2–21] (on *An* 414b20–33; cf *in An* 16.18–17.8; 28.14–29.1); and a fragment from *in Int* quoted by Porphyry in his own *in Int* (77a = Boethius, *in Int²* 16.20–29).—Alexander is aware that Aristotle frequently uses the term 'genus' of items which show an ordering; but he insists that that is a loose use of the word (e.g. *in Top* 228.11; 292.10–11; 303.19–20; 312.3; 325.26–29; 337.13–16).

²³ For the issue see Boethius, *in Int¹* 17.28–18.26; *in Int²* 98.19–29; Ammonius, *in Int* 67.30–68.5.

²⁴ See e.g. Dexippus, *in Cat* 67.11–16; Simplicius, *in Cat* 126.6–14; 415.28–30; *in An* 107.7–14; Victorinus, *in rhet Cic* I 22 [211.25–33], where he appeals to a version of the principle in order to refute the 'Greek' view that being is a genus (above, p. 118 n. 75).

There is nothing common to the ten types of predication, although some take existent or something to be so—for they are not predicated equally of everything. (Simplicius, *in Cat* 61.21–22)²⁵

Substance is prior in this sense: if you get rid of a substance, you thereby get rid of its accidents; but if you get rid of an accident you do not thereby get rid of its substance. (If you cool the champagne, you destroy one of its accidents—its warmth—but you leave its substance untouched. If you drink the champagne, its substance goes—and all its accidents, bar an aftertaste, with it.)

The argument is here applied to the supposition that existence is a supreme genus; but it will work equally against any candidate for supreme genus. Let C be the candidate. Then absolutely everything is a C, and C is associated with each of the ten predication. So the Cs fall into ten groups—and these groups form an ordered series. (See Ammonius, *in Isag* 81.16–83.22.)

The principle had an excellent pedigree but some disagreeable offspring. Thus Iamblichus insists that there is a genus of numbers, even though the numbers form an ordered series:

For two does not make three as a prior makes a second—rather, their priority and posteriority are enumerated in one aspect and their community of genus holds of them in another insofar as neither is any more or less included in it. (*apud Simplicius, in Cat* 146.32–147.1)

Again, Porphyry held, against Alexander, that affirmation and negation are two species of the genus proposition; but he could not deny that affirmation is prior to negation—after all, Aristotle himself had said so. More generally, some States are independent and others dependent, some fruit-trees are natural and others are grafted, some soldiers are officers and the rest are other ranks—in these cases, and in ten thousand more, a group of items is divided into subgroups which are, in one way or another, in relations of priority and posteriority among themselves. Why deny that such subgroups are species of a genus?

Defenders of the principle had two tasks. First, the type of priority which it invokes must be specified (for Aristotle distinguished at least five varieties of priority). Secondly, it must be explained why the specified

²⁵ If the ten types are not species of a genus, what are they? According to Alexander's teacher, Herminius, the account of the predication is 'an enumeration and not a division or a partition; for there is no whole for them—neither as a genus nor in any other way' (*apud Simplicius, in Cat* 62.7–9)

form of priority cannot hold among the different species of a genus—and the explanation needs to be something more than a stipulation.

(G) Platonists and Aristotle's 'categories'

Porphyry was not the first Platonist to embrace Aristotle's ten types of predication (6.6–7): Alcinous had approved of the ten—and found them in Plato's *Parmenides* (*didask* vi [159.43–44]); Plutarch had approved of them—and found them in the *Timaeus* (*an procr* 1023E)—‘here he gives a delineation of the ten types of predication’).²⁶ But others had disapproved: Atticus, a resolute anti-Aristotelian, growled that Aristotle's predication have no pertinence to Plato's divine philosophy (frag 2 = Eusebius, *PE* XV iv 19); and Plotinus had done more than growl.

In three connected essays which he wrote while Porphyry belonged to his circle (*v Plot* v 51–60) and which appear in the Porphyrean edition of his works as *Enneads* VI i–iii, there is a long discussion of the 'genera of existents'. VI i 1–24 directs a sequence of questions and criticisms at Aristotle's *Categories*, arguing that Aristotle's theory cannot be applied to what Platonists regard as the really real beings. (The view had already been advanced by the Aristotelian Boethus: Simplicius, *in Cat* 78.4–5; it is sometimes ascribed to Eudorus on the basis of *ibid* 206.14–15.) VI i 25–28 looks in the same way at the four Stoic 'categories'. VI ii develops the true theory of the genera of existents—namely the theory of the five 'greatest genera' which Plato had laid out in the *Sophist*.²⁷ VI iii turns to the genera of quasi-beings—that is to say, of items in the humdrum world of reality—and urges that there too Aristotle is inadequate: five genera are quite enough. (But Plotinus' five are not simply five of Aristotle's ten—nor do they correspond to his five Platonic genera.)

²⁶ Plutarch had written an essay on the decad (Lamprias catalogue, no. 192—nothing but the title survives).—On *Tim* see also Calcidius, *in Tim* CCCXXXVI [329.4–18]; on *Parm* see also Proclus, *in Parm* 1083.37–1084.4; note also anon, *in Th* LXVIII 7–15—but the text does not attribute a knowledge of all ten types of predication, nor of a theory of predication, to Plato.—Hippolytus, *ref haer* VI xxiv 1–2, ascribes the Aristotelian theory to Pythagoras. The pseudo-Archytan pastiche of the *Categories* was presumably written before Porphyry. Iamblichus and his successors believed it to be genuine: 'Archytas the Pythagorean made the division into ten primary genera even before Aristotle' (Simplicius, *in Cat* 2.15–16); see e.g. Centrone, 'Pseudo-Archytas'.

²⁷ That is to say, Plotinus reconstrues the 'greatest genera' of the *Sophist* as 'genera of existents'—despite the fact that one of the greatest genera is precisely the genus existence. On Plotinus' transformation of the theory see e.g. P. Hadot, *Porphyre* I, pp. 214–225.

Plotinus' detailed remarks, many of which are taken over from earlier critics of Aristotle (see Simplicius, *in Cat* 76.13–17), are often acute; and they are sometimes constructive. Moreover, Plotinus never implies that a philosopher should not bother himself with Aristotle's *Categories*: on the contrary, he shows that he had studied the work minutely, and he surely thought that other philosophers should do the same.

The major part of Dexippus' *Questions and Solutions* was devoted to a consideration of the difficulties raised in Plotinus' essays. Aristotle is given a clean bill of health—but at a price. The doctrine of the *Categories* is taken to refer exclusively to the humdrum world, and to be primarily concerned with our ways of talking and thinking about that world. Dexippus is following Porphyry. For just as it is misleading to state that Plotinus 'rejects' the *Categories*, so is it misleading to state that Porphyry 'reinstates' them. Porphyry accepts the principal conclusions of *Ennead* VI i: the Aristotelian theory cannot be applied to the world of real reality. He rejects the principal claims of VI iii: the humdrum world in which we live needs ten genera and not five.²⁸

The issue was part of a larger question: what should a Platonist think of Aristotle? Most Platonists, finding their own territory cramped, were prepared to colonize, declaring Aristotle—or parts of Aristotle—compatible with Plato and hence with the truth. Long before Porphyry's day, Platonism had absorbed Peripatetic material (and Stoic material too)—witness the handbooks of Alcinous and of Apuleius.²⁹ According to Porphyry, 'there are mingled in <Plotinus> treatises hidden Stoic doctrines, and also Peripatetic ones—and Aristotle's treatise *Metaphysics* actually fills them up' (v *Plot* xiv 4–7). It is often supposed that

²⁸ There is a large literature on the matter: see e.g. Lloyd, 'Neoplatonic Logic'; Hadot, 'Harmonie'; Anton, 'Plotinus'; Aubenque, 'Plotin'; Strange, 'Neoplatonic interpretation'; Evangelisti, 'Plotinian Reduction'; Aristotle's *Categories*; Strange, 'Plotinus'; *Categories*; Chiaradonna, 'Sostanza in Porfirio'; 'Essence et préédication'; *Sostanza*; de Libera, 'Aristote et Plotin'; de Haas, 'Plotinus and Porphyry'.—On the history of the Aristotelian decad between 100 BC and AD 250 see Praechter, 'Nikostratus', pp. 494–517; Mansfeld, *Heresiography*, pp. 57–133.—Chiaradonna, 'Sostanza in Porfirio', p. 75 n. 39, thinks that Plotinus sometimes replies to objections made by Porphyry, citing as an example *enn* VI iii 9.38–42 with *in Cat* 91.19–23 (cf pp. 87–89). He does not say that Plotinus had read *in Cat*; and perhaps he thinks that Porphyry had made the same objections orally in Plotinus' presence. However that may be, the example is unpersuasive: what Plotinus says at VI iii 9.38–42 is accepted by Porphyry at *Isag* 17.8–10 (above, pp. 270–276); and it is perfectly consistent with the position stated at *in Cat* 91.19–23, which is not an objection to anything which Plotinus might have wanted to say.

²⁹ Thus it has been said of *Isag*—perhaps with a little exaggeration—that 'Porphyry's famous little treatise presents the gist of the (Middle) Platonist logical doctrines which owed more to Aristotle than to Plato' (Mansfeld, *Heresiography*, p. 98).

Porphyry urged a more generous collaboration, and that he prepared the ground for the later Platonic practice of treating the philosophical works of Aristotle as a prelude to Plato.

Augustine refers to those who have attempted a general reconciliation of Aristotle and Plato (*c. Acad.* III xix 42). Boethius announces that

I should be pleased somehow to bring the opinions of Aristotle and Plato into a single harmony, and to show that they do not disagree in all things, as most think, but rather agree in most things—and in the most important elements of their philosophy. (*in Int² 80.1–6*)

It is probable that Augustine has Porphyry in mind, and that Boethius is imitating Porphyry—they are perhaps alluding to Porphyry's work *On the thesis that the schools of Plato and of Aristotle are one* (Suda, s.v. *Πορφύριος*). The work was in seven books. Its title, in the Greek, strongly suggests that Porphyry argued in favour of the thesis it proposes for discussion. Not a fragment survives; but traces have been detected in a tract by a tenth century Arab, al-Amiri, and in Hierocles' essay *On Fate and Providence*.³⁰

Hierocles' essay is known only from the summaries in Photius, *bibl. cod. 214* and *251*. According to it,

many of the Platonists and Aristotelians applied their diligence and scholarship to show that their masters disagree with one another in their major doctrines . . . This state of affairs infected the philosophical schools until the time of Ammonius of Alexandria . . . He had an acute knowledge of the views of the two men, and he brought them to one and the same line of thought. (Photius, *bibl. cod. 251*, 461a24–37)

Hierocles exaggerates. But there is no reason to doubt that Ammonius—who was Plotinus' master—attempted a general reconciliation of Plato and Aristotle. And it is likely that Hierocles' source for his information on Ammonius was Porphyry.

Porphyry also wrote an essay *On the disagreement between Plato and Aristotle*. Or so Elias says (*in Isag.* 39.6–8)—but some have deemed the title a phantom. In any event, there is no reason to doubt the existence of *Against Aristotle's view that the soul is an actuality* (Suda, s.v.

³⁰ On al-Amiri see Walzer, 'Porphyry', pp. 286–294; Ghorab, 'Greek commentators'; for Hierocles see Romano, *Porfirio*, pp. 27–33.—Girgenti insists that Porphyry was a mediator between Plato and Aristotle not only in logic but also in metaphysics (*Isagoge**, pp. 7–11); but the 'main document' in support of his thesis is the anonymous commentary on *Parm.*—For a particular example of agreement between Plato and Aristotle see in *Ptol. harm.* 49.2–4.

Πορφύριος);³¹ and it is plain that Porphyry's conciliatory desires were not unlimited.

(H) Parts and Species

Plato sometimes uses 'part' and 'species' interchangeably;³² but in the *Statesman* the Young Socrates suspects that there is a difference between the two and wants to know what it is. The Eleatic Visitor replies that the matter is deep and difficult; but he affirms that

species and part are different from one another . . . When something is a species of something it is necessarily also a part of the object of which it is said to be a species; but there is no necessity for a part to be a species. (*Plt* 263B)

Aristotle takes up the point and transforms it. In Δ 25 of the *Metaphysics* he catalogues five ways in which we talk of parts of things—or rather, in which Greeks talked of the *μέρη* of things. The third way:

The items into which a species divides with reference to its quantity are also called parts [*μόρια*] of it—that is why people say that species are parts of the genus. (*Met* 1023b17–19)

(And hence a genus is a whole: 1023b27–32.) But then the fifth way:

Again, the elements in the formula which indicates a thing are also parts of the whole—that is why a genus is said to be a part of the species (in a way different from that in which a species is a part of the genus). (1023b22–25)

In one way, a species is part of its genus (men are one kind of animal); but in another way, a genus is part of its species (being an animal is part of what it is to be a man). The latter point is repeated, and elaborated, in the Peripatetic tradition;³³ and it goes along with the notion that a genus and the differences 'complete [*συμπληροῦν*] the species.³⁴ Thus

³¹ See Moraux, 'Le *de Anima*', pp. 305–309; for the title see Smith, 'Porphyrian treatise' (cf Plotinus, *en* V vii 8⁵, with Eusebius, *PE* XV x 1). According to Smith, 'we are . . . left with the intriguing but not impossible picture of Porphyry arguing for the unity of Plato and Aristotle and yet not shrinking from direct criticism on certain issues in which he could be quite vehement' (p. 186). 'Intriguing but not impossible'? Rather: 'highly probable and not in the least surprising'.

³² See e.g. *Soph* 220B; 221B, E; cf e.g. Apuleius, *int* i [189.2] (*species seu partes*).

³³ Cf e.g. Alexander, *in Met* 110.12–13 ('Animal is part of each of the animals'); 410.6; 422.23–25; 424.10–25; Victorinus, *def* 14.23–29; Simplicius, *in Cat* 55.12–15.

³⁴ On 'completion' see above, pp. 179–180.

The difference is a part of the species inasmuch as each of the items taken into the definitional formula is a part of that of which it completes the substance. (Alexander, *in Met* 205.22–24)

At 8.1–3 Porphyry does not say that genera are parts: does he mean to reject the thesis? No: he does not think that genera are parts of their species in the same way as species are parts of their genera—but then no Peripatetic had every thought so. Is the tradition, and Porphyry's thesis, illuminating? Some scholars have thought so;³⁵ and some commentators have tried to put it to work. Thus Alexander observes that 'a species is in a way a part of its genus; and the parts of parts are also parts of their wholes' (*in Top* 302.6–7)—and he concludes that a species of a species of a genus is a species of the genus.

But 'part' is ambiguous. In what sense is a species a part, and in what sense a whole? Well, individuals are not wholes in the following sense: individual predicates do not hold of a plurality of items, they do not 'divide' or 'split'.³⁶ A species does divide and split: hence, in this way, it is a whole. It is in this spirit that Alexander suggests that if A holds of every B, then the Bs are part of A (*in APr* 25.2–5)—and such a notion of parthood explains the use of part/whole terminology in categorical syllogistic.³⁷ But in this sense differences and properties and accidents also have parts and are wholes. Porphyry does not expressly deny that this is so; but it may be suspected that, in his view, only genera and species are wholes.

Then how might 'raven' name a sort of whole and 'black' not? Perhaps black items do not have the unity which is required for something to be a whole (or even a sort of whole); and perhaps X is a unified predicate if and only if there are a certain number of substantial and scientific truths of the form 'Y holds of every X'?³⁸

This is vague, and it is not explicit in the ancient texts. Asked in what sense of 'part' a species is a part of a genus, the tradition answers: 'in the sense in which a species is a part of a genus'—and so it is a trifling

³⁵ 'Being an animal is part of what being a cat is. Note that this involves being a part in a non-extensional sense of part. Given that the set of cats is a proper subset of the set of animals, there will be another, extensional, sense of part in which the cats can be said to be a part of the animals' (Mann, *Discovery*, p. 77 n. 4).

³⁶ See above, p. 151.—In another way, or in other ways, individuals are, of course, wholes; for 'each of the many individuals is both a sort of whole and as it were a part of what is predicated of them in common' (Ammonius, *in Int* 97.3–4)

³⁷ Aristotle, *APr* 24a17–19, b26–27; cf. Boethius, *syll cat* 810B; see Barnes *et al.*, Alexander, p. 28.

³⁸ See Barnes, 'Bits and Pieces', pp. 244–249.

truth that species are parts. Porphyry was aware of the point—that is why (according to [Elias], in *Isag* xxxviii 20–22) he speaks of ‘a sort of whole [*ὅλον τι*]’ (8.1; cf 15.13) rather than ‘a whole’.³⁹ And Alexander acknowledges that

a whole does not resemble in every respect a genus, nor does a part a species: it resembles it in certain ways and differs from it in others. (in *Xenoc* p. 9)

Trivial truths may be illuminating. Not this one. The term ‘division’ was taken to have several senses.

They say that division comes about in four ways: either a word is divided into meanings, or a whole into parts, or a genus into species, or a species into particulars. (Sextus, *PH* II 213)⁴⁰

These four operations are distinct; and occasionally an attempt was made to give them different names—thus the division of a whole into its parts was properly called ‘partition [*μερισμός, partitio*]', and ‘division [*διαίρεσις, divisio*]’ was properly reserved for division into species.⁴¹ Boethius insists that, although ‘a genus is always a whole for its own species’ (*div* 878B), nonetheless the division of a genus into its species is quite different from the division of a whole into its parts (*ibid* 879B–880A); and a little later he observes that, although a division of a genus is like a division of a whole into its parts, it is not literally such a division, and that, although the definition of a genus is like the composition of a whole from its parts, it is not literally such a composition (887BC).⁴²

Boethius may be clear; but it was easy to muddle the different sorts of division:

³⁹ Cf Aristotle, *Phys* 184a25–26: ‘A universal is a sort of whole [*ὅλον τι*]; for a universal comprehends [*περιλαμβάνει*] many items as parts.’

⁴⁰ A different tetrad at Alcinous, *didask* v [156.34–157.1]; more elaborate divisions of division at Boethius, *div* 877BC; scholia to Dionysius Thrax, *GG* I iii 132.1–31. ‘Some reject division of species into individuals, saying rather that this is an enumeration. For every division is into two or three or—very rarely—four; but a species is divided into items infinite in quantity (for particular men are infinite in quantity)’ (John of Damascus, *dial* 6).

⁴¹ See esp Cicero, *Top* v 28–vi 31, with Boethius, in *Cic Top* 1104A–1106A; cf Quintilian, V x 63; see Nörr, *Divisio*, pp. 20–38, for the distinction between partition and division proper—and pp. 39–44 for the common conflation of the two operations.

⁴² But according to the same Boethius, individuals are the component parts of their species—the relation between Socrates and the species man is precisely the relation between Socrates’ nose and Socrates himself: ‘Man is not a genus [see Aristotle, *Met* 999a5–6] nor are individual men species—rather, they are parts from which man as a whole is composed’ (*div* 877D; cf in *Cat* 174B).

The word ‘division’ is used properly when a whole which is continuous is cut into parts; it is also used, by transference from this case, when a genus is split into differences or species. Some people get confused in such splittings so that they cannot distinguish the division of a substance into its parts from the division of genera and differences and species . . . (Galen, *PHP* V 804)

Cicero had made the same complaint:

Those who think that species are the same as parts confound the business, and, disturbed by a certain similarity, do not distinguish with sufficient accuracy items which must be held apart. (*Top* vii 31)⁴³

When genera and species are spoken of in mereological terms, there is no illumination: at best there is tautology, and at worst confusion. The terms are best avoided.

(I) Individuals

According to Porphyry, an individual ‘is constituted [$\sigmaυνέστηκε$] of features ‘the assemblage [$\ddot{\alpha}\thetaροισμα$] of which is not found elsewhere (7.22).⁴⁴ The theory has usually been taken to concern not the meaning of individual predicates but the nature of individual items. Plato is a man (rather than a mouse) insofar as he is a rational mortal animal. But what makes him Plato (rather than Plautus)? That is the question which the theory was supposed to address.⁴⁵ Later Platonists criticized what they took to be Porphyry’s answer to it. Thus according to Olympiodorus, Proclus thought that

the Peripatetics went wrong about individuals, thinking that they depend on concurrences of accidents—hence they define them thus: an item the assemblage of which will never be found in anything else. They make the better from the worse—from accidents. (*in Alc* xxiv [204.5–12])

‘They define them thus’—Proclus cites the *Introduction* for the Peripatetic view.

⁴³ Cf Victorinus, *def* 14.23–15.11; Boethius, *in Cic Top* 1107A.—Cicero himself, elsewhere, is happy enough to talk of species as parts: e.g. *inv* I xxii 32 (above, p. 98); ix 12; xxviii 42; xxxii 54; *de orat* I xlvi 189. For an example of the confusion against which Cicero and Galen warn see Clement, *strom* VIII vi 19.3–6.

⁴⁴ Comparable uses of ‘ $\sigmaυνίσταναι$ ’ at *in Cat* 101.31–37; 103.6; 122.3–4.

⁴⁵ For what follows see Lloyd, ‘Neoplatonic logic’, pp. 158–159; Sorabji, *Matter*, pp. 44–59; Lloyd, *Anatomy*, pp. 43–49.

David reports an elaborate dispute between Peripatetics and Platonists: the latter complain that Porphyry makes individuals consist of accidents; the former retort that he does not mean that individuals are constituted by accidents—he means that they are recognized by them. (See *in Isag* 168.16–169.17). As Arethas puts it,

Aristotle does not think that individuals get their substance from accidents—rather, they are recognized from their accidents and characterized by them. (*in Isag* 64.17–19)⁴⁶

Perhaps some Peripatetics took this line; but nothing in the *Introduction* warrants its ascription to Porphyry, who speaks of constitution and not of recognition.

In the *Theaetetus* Plato sketches a theory which construes ordinary objects—men and stones and the like—as assemblages of qualities.⁴⁷ The theory had a life. It was rejected—or radically transformed—by Epicurus: he teaches that ordinary bodies are ‘assemblages’, but assemblages of atoms and not of qualities (*ad Hdt* 62, 63, 64, 65); and speaking of ‘shapes and colours and sizes and weights and the other items predicated of the body as accidents’, he says that

a whole body cannot have its eternal nature consisting of all these things amalgamated [*συμπεφορημένων*] in the way in which a larger assemblage is constituted of particles . . . (*ad Hdt* 68–69)

Later, the theory was developed by Plotinus. He asks:

Are perceptible substances a sort of amalgam [*συμφόρησις*] of qualities and of matter, such that when they are all established together in a single piece of matter they are substances while each taken separately will be either a quality or a quantity (or several qualities)? (*enn VI* iii 8.19–23)

And shortly afterwards he notes that

as to quality, we have said that, mixed with other qualities and with matter and quantity, it makes the completion of a perceptible substance. (*ibid* 15.24–25)

⁴⁶ Philoponus has it both ways, remarking on ‘certain proper features and accidents from which the particulars are constituted and recognized’ (*in APst* 437.17–19—unless the second ‘and’ is epexegetic).

⁴⁷ Note ‘ἀθροισμά’ at *Tht* 157BC; cf 209C (‘snub-nosedness . . . and the other items from which you are’).

Plotinus adds that we should not object that a substance cannot be composed of non-substances—for here we are talking not of true substances but of their mundane imitations (VI iii 8.30–34).

There is something similar, and more elaborate, in Sextus. ‘Some of the philosophers’, he says, hold that man in general (*ὁ γενικὸς ἄνθρωπος*) is composed of a collection of accidents (*M VII* 269). There were objections to the thesis, and ‘some of those who are thought in the dogmatic school to be intelligent’ explained that

each of the elements enumerated is not man, but all of them, gathered in the same object, constitute man. (*ibid* 276)

For just as the parts of an item make up the whole item, so ‘the assemblage [*ἄθροισμα*] of all the accidents is man’ (*ibid* 277; cf *M IX* 338). Finally, Sextus describes what he calls the Platonic theory, which is similar but even worse (*ibid* 281–282).

The theory has been sought in other Platonic texts. In Alcinous, for example:

Among sensible items, some are primary, e.g. qualities (colour, white), others are accidental (e.g. the white, the coloured), and after them the assemblage [*ἄθροισμα*], e.g. fire, honey. (*didask* iv [155.42–156.3])⁴⁸

Or Plutarch:

The divine is not a plurality in the way in which each of us is an assemblage [*ἄθροισμα*], various and kaleidoscopically mingled, of a thousand different qualities. (*E apud Delph* 393B)

The theory reached the Byzantine encyclopaedias:

Properly, that which subsists in its own right and with a subsistence of its own <is called a subsistent>—so an object subsisting and substantial in which the assembly of accidents subsists as in a single underlying object and actuality. (*Suda*, s.v. *ὑπόστασις*)

‘The theory’: in fact, there are two or three distinct theses in the texts. The *Suda* suggests that Socrates is an object in which an assemblage of qualities exists; Plotinus suggests that Socrates is an assemblage of qualities together with the matter in which they exist; and most of the other texts suggest that Socrates is an assemblage of qualities *tout court*.

⁴⁸ See Lloyd, ‘Neoplatonic Logic’, p. 159; Schrenk, ‘*ἄθροισμα*’.

Porphyry—according to the view under the hammer—maintained the theory in the third of these versions:⁴⁹ Socrates is an assemblage of qualities. The view is expounded, and rejected, in a passage in Dexippus, which is taken to have Porphyry in its sights:⁵⁰

By what does one individual differ from another individual? For each of them is one in number.—Some answer the question by reference to properly qualified items [*ἰδίως ποιόν*]; that is to say, insofar as this individual is characterized by hook-nosedness or being blonde or some other concurrence of qualities, while that one is characterized by snub-nosedness and baldness or having blue eyes, and another by other qualities. In my opinion, this answer is not correct; for the concurrence of qualities makes them differ not in number but rather, if anything, in quality. Thus we should answer as follows: things different in number do not differ by nature nor in substance but possess diversity insofar as they are counted—thus they are different *qua* countable. (*in Cat* 30.21–30)⁵¹

Whatever is made of Dexippus' constructive suggestion, his objection to the allegedly Porphyrean view is compelling: how could Socrates, a thing of flesh and blood, be made or constituted by a set of qualities or accidents? If you add snub-nosedness to baldness you get a complex quality—you do not get a chap.

(J) Diversity and otherness

In his account of differences, Porphyry uses the four terms ‘*ἕτερος*’, ‘*ἕτεροῖος*’, ‘*ἄλλος*’, and ‘*ἀλλοῖος*’ (‘diverse’, ‘diversified’, ‘other’, ‘otherlike’) as though they had familiarly distinct senses. Ordinary Greek

⁴⁹ So Lloyd: ‘. . . the description of sensible individuals as bundles of qualities is the theory of Plotinus himself (VI 3, 8). In Porphyry it has a double motive. Whether or not he was conscious of it, it is the natural conclusion of a logic that concerns itself only with predicates as classes . . . But it is also, as it was in Plotinus, pure Platonism. For despite the fact that the particular had somehow to be the logical subject, it could never for a Platonist be a substance’ (‘Neoplatonic logic’, p. 159). Lloyd's first reason I do not understand, and his second reason is based on a misreading of the texts—as he later declares: ‘In fact the standard meaning of the widely accepted description of individuals as bundles of properties was that they were bundles of properties *qua individuals*; and this meant no more than that uniquely instantiated sets of accidents were the principle of individuation’ (*Anatomy*, p. 46).

⁵⁰ So P. Hadot, *Porphyre* II, p. 99 n. 4; Chiaradonna, ‘Teoria dell’ individuo’, pp. 317–328.

⁵¹ See also Simplicius, *in Cat* 51.11–13: ‘Individuals are items which are not split by differences and for that reason are not one in genus or species but only one in number, having their unity in being counted.’

does not make any pertinent distinctions: was there a technical use of the terms in the philosophical tradition?

According to Simplicius,

Plato called every difference in respect of form, where the subject remains, an ἀλλοίωσις, inasmuch as such a difference makes the item otherlike and not other. (*in Cat* 428.31–429.1)

He is presumably thinking of a passage in the *Theaetetus* where Plato uses the word ‘ἀλλοίωσις’ (181DE)—but Plato uses it without explanation, and the words ‘ἀλλοῖος’ and ‘ἀλλος’ are not in his text. There is indeed a link, semantic as well as etymological, between ‘ἀλλοίωσις’ or ‘alteration’ and ‘ἀλλοῖος’ or ‘otherlike’ (see, e.g. Aristotle, *Cat* 15a29–32).⁵² But Plato does not draw attention to the link. Elsewhere he associates alteration with becoming other (*Parm* 162D) and, equivalently, with becoming diverse (*ibid* 163D); and he further indicates that becoming other makes something otherlike (*ibid* 148C).

Another passage from the *Parmenides* seems more promising:

—The others [ἄλλα], being diverse [ἕτερα] from the One, will in fact be diversified [ἕτεροια]?

—Yes.

—And what is diversified is otherlike [ἀλλοῖα]?

—Indeed it is. (161A)

Perhaps reflection on this passage induced later Platonists to discover distinctions among the four terms it deploys? There is no evidence that it did so—and there are no distinctions which a reader will readily extract from the text.

In the *Topics* Aristotle discusses a trick which turns on failing to distinguish between the man and the pale man:

You should say that that of which an accident holds and the accident taken together with that of which it holds are not diverse [ἕτερον] simply but are said to be other [ἄλλο] inasmuch as what it is to be each of them is diverse [ἕτερον]; for to be a man, for a man, and to be a pale man, for a pale man, are not the same. (*Top* 133b31–36)

It appears at first reading that Aristotle draws a distinction between ‘diverse’ and ‘other’. But the appearance is false: the distinction is

⁵² Cf Arethas, *in Isag* 73.25–27: ‘common and proper differences make things otherlike—for they make what is only an alteration [ἀλλοίωσις], and that usually minor, in their subjects’.

between ‘diverse simply’ and ‘other inasmuch as . . .’; and ‘diverse’ and ‘other’ are taken to be synonymous.

In *Metaphysics* 4 Aristotle reports that ‘diverse’ is used in several ways:

Items are said to be diverse if either their forms are several or their matter is or the account of their substance is—and in general, ‘diverse’ and ‘same’ are taken contradictorily. (1018a9–11)

Nothing here serves to distinguish ‘diverse’ from ‘other’. In Book I Aristotle returns to diversity. Having urged that things are called same and similar in several senses, he says:

Hence it is clear that things are also called diverse [$\epsilon\tau\epsilon\rhoov$] and dissimilar in several senses.

(‘Same’ and ‘diverse’ are opposites,⁵³ and it is an Aristotelian principle that if one of a pair of opposites is ambiguous then so too, in most cases, is the other.)

In one sense what is other and opposite to the same is called diverse, so that everything is either other or else the same in relation to everything.

(In the first sense, then, ‘diverse’ means ‘other’.)

Again, if the matter and the account are not one, so that you and your neighbour are diverse. Thirdly, as in mathematics.

(The cryptic reference to mathematics is explained by 1054b1–2: equal lines and figures are said to be the same, so that one straight line will be ‘diverse’ from another if and only if it is of a different length. As for the second sense, how does it differ from the first?)

Now for this reason everything is said to be diverse or the same in relation to everything—everything, that is, which is said to be one and existent. For diverse is not the contradictory of same, so that they are not said in relation to what does not exist (such items are said not to be the same), but in relation to all existent items.

(‘a is diverse from b’, unlike ‘It is not the case that a is the same as b’, entails that a exists and that b exists. Hence ‘Either a is the same as b or a is diverse from b’ is true if and only if both a and b exist. Does this distinguish diversity from otherness? Aristotle does not say so, and it seems unlikely.)

⁵³ As 1018a11 affirms—cf e.g. Plato, *Soph* 254D–255B; Galen, *PHP* V 278; Plotinus, *enn* V i 4.34–35.—For the Aristotelian principle see *EN* 1129a23–26.

For what exists and is one either is one or is not one.

(Text and interpretation are quite uncertain.)

A difference is other than diversity. For what is diverse in relation to something is not necessarily diverse as to something—for what is existent is either diverse or the same. But what is different from something is different as to something, so that there must be some same item as to which they differ. This same item is a genus or a species—for everything different differs either in genus or in species. (*Met* 1054b13–27)

If **a** differs from **b**, then **a** is diverse from **b**; but not *vice versa* (see Alexander, *in Met* 254.17–20). For if **a** differs from **b**, then either **a** differs in genus from **b** or else **a** differs in (lowest) species from **b**. This might perhaps lead to a distinction between ‘diverse’ and ‘other’, ‘other’ being associated with ‘different’. But what Aristotle says about ‘different’ here is arbitrary—and sits ill with Book Δ where, as Alexander explains, he says that things are said to be different from one another, in one sense, when they are not only diverse from one another but have their diversity from one another while being the same in some one respect. (*in Met* 378.28–30)

There is more Aristotelian material; but none nearer to Porphyry than what I have cited. And although pertinent distinctions could have been spun from the texts, there is no evidence that they were so spun.

Neither Plato nor Aristotle provides technical senses for the four terms. I find nothing pertinent in any Stoic texts, nor in Plotinus, nor in the Greek grammarians.

(K) Do differences entail their genera?

If **X** is a divisive difference of **Y**, does it follow that **Y** is predicated of **X**? If nucivorous is a divisive difference of bird, does it follow that all nut-eaters are birds? Aristotle’s position seems to have varied. Often enough, differences are supposed to be logically independent of their genera; but in other texts, and notably in the metaphysical writings, differences are required to entail their genera.⁵⁴ In *Topics* Z 6 Aristotle advises the dialectician

⁵⁴ See Granger, ‘Genus-species’ and ‘Genus and differentia’.—In ‘Differentia and *per se* accident’ Granger argues further that a difference is a *per se* accident of its genus; i.e. (see p. 121) that (1) a difference is not part of the essence of its genus, (2) the genus is part of the essence of its differences, and (3) a difference is a necessary attribute of its

to consider whether what has been stated as a difference is a difference of a diverse genus which neither is contained by nor contains the given genus. For it seems that the same item cannot be a difference of two genera which do not contain one another—otherwise the same species will be found in two genera which do not contain one another; for each difference introduces its own genus, as footed and biped co-introduce animal. (144b12–18)

A difference introduces, or entails, its genus: hence a predicate cannot differentiate two independent genera. But the thesis needs qualification:

Yet perhaps it is not impossible for the same item to be a difference of two genera which do not contain one another—but we should add: ‘and are not both under the same genus’. For terrestrial animal and winged animal are genera which do not contain one another, and biped is a difference of each. (144b20–24)

The modification allows that, in certain conditions, a predicate may differentiate two distinct genera. It follows that a difference does not entail its genus.

And it is clear that it is not necessary for a difference to introduce the whole of its own genus, since it is possible for the same item to be a difference of two genera which do not contain one another. (144b26–28)

Yet Aristotle will not abandon entailment entirely:

But it is necessary only that it introduces the one of them (and whatever is above it), as biped co-introduces winged or terrestrial animal. (144b28–30)

This is naturally taken to mean that biped sometimes introduces terrestrial animal and sometimes winged animal—and that it always introduces animal. But that is incoherent—entailment is not a sometimes affair. Perhaps, then, Aristotle means that biped introduces the disjunction of terrestrial animal and winged animal—that if a predicate differentiates several genera in the manner indicated, then it entails their disjunction.⁵⁵

Alexander takes a different line:

The appropriate divisive differences of something do not extend further than that which they divide—e.g. none of the differences which divide animal falls

genus ‘inasmuch as it occurs in relation to its subject as the member of an exclusive disjunction composed of opposing disjuncts, one of which must belong to the subject’. Condition (3) makes every attribute necessary to its subject.

⁵⁵ For a discussion of the passage see Falcon, ‘Rules of division’—Falcon’s interpretation has Aristotle contradict himself.

outside animal or holds of anything which is not an animal. For the differences which split something in the strict sense must be contained in what is split by them. Some may seem to extend further than what is split by them; but it is because they are strictly speaking differences not of those items but rather of genera superordinate to them that they seem to exceed them, and they no longer exceed those genera. For example, if you were to split terrestrial animal by biped, the difference biped seems to be in every sort of animal (it is also in winged animal); for it is strictly divisive of animal, further than which it cannot be said (for there is no biped which is not an animal). (*mant* 169.11–21)

Alexander goes on to infer that male/female is not a differential pair for men—since it also divides all other animals. (He adds that it is not a specific difference for animals either—but that is another matter.)

(L) Differences and qualities

If a predicate answers ‘What sort of thing [$\piοδον τι$]?’ (11.7–17), it is natural to infer that it signifies a quality ($\piοιοτης$) of the item, or that it designates the item *qua* qualified ($\piοιον$)—and hence that it belongs to the fourth of Aristotle’s ten types of predication. Now Aristotle himself had indeed stated that differences are qualities (e.g. *Met* 1024b3–6).⁵⁶ But even his followers deemed this unsatisfactory—for example,

if all differences fall under quality, then evidently the differences of quality itself will be under quality, and thus a genus will be predicated of its own differences. (Alexander, *in Met* 206.17–19)

The question of the ‘categorial’ status of differences was a long-standing subject of dispute.⁵⁷

What may be called the orthodox position was this: differences are qualities, but qualities of a special sort—substantial or essential qualities. Boethius, for example, considers the argument that, since differences are

⁵⁶ In connection with the example at *Top* 122b16–17 (above, p. 104) ‘terrestrial’ does not signify in the category of ‘where’: it indicates what sort of animal the thing is, not where it lives (*Top* 144b31–145a2).

⁵⁷ See e.g. Alexander, *diff spec*; Plotinus, *enn* II vi; Dexippus, *in Cat* 48.20–49.25 (who says that he takes the problem from Plotinus—who perhaps took it from Nicostratus or Lucius or Cornutus . . .); Simplicius, *in Cat* 97.24–99.18 (giving the ‘different schools of thought [$αιρεσεις$] about differences’: 99.1). See Sainati, *Storia dell’ Organon*, pp. 91–97, 113–116; Gyekye, *Arabic Logic*, pp. 206–209; Granger, ‘Genus and differentia’; Morrison, ‘Statut des différences’; de Haas, *Philoponus’ New Definition*, pp. 180–250.

predicated in the substance of an item, they must show what it is. He rejects the inference: differences do not indicate what something is—rather, they determine a quality with respect to the substance (*in Isag*² 194.5–19). So too Simplicius (e.g. *in Cat* 55.7–9), and Dexippus (*in Cat* 48.6–7), and Alexander—for example:

A genus is predicated in answer to ‘What is it?’, a difference signifies what sort of thing the subject is, not what it is . . . But . . . a difference is not simply a qualification: a difference in a substance determines the qualification about the substance, it is not a qualification but a substance. (*in Top* 314.15–23)⁵⁸

Boethius finds the view in Porphyry, at 3.10; and also in Aristotle (*in Cat* 192BC; cf *div* 879B; 880B). Porphyry himself ascribes it to Aristotle:

Aristotle says that a difference is neither only a quality (for in that case it would be an accident) nor only a substance (for in that case it would be counted among secondary substances); but rather this, a substantial quality, taken as a whole⁵⁹—that is why it is predicated of each thing in answer not to ‘What is it?’ but to ‘What sort of so-and-so is it?’. (*in Cat* 95.17–20).⁶⁰

The view is indeed Aristotelian. The section in *Metaphysics* 4 which discusses ‘qualified’ begins thus:

In one way, the difference of a substance is called a qualified item—e.g. man is a qualified animal, namely a biped, (and horse a quadruped), and a circle a qualified shape, namely angle-less—the difference being a quality with respect to the substance. (1020a33–b1)⁶¹

⁵⁸ See also e.g. *in Top* 47.14–18; 113.22–27; 421.15–16; 444.5–8; 451.15–18; *in Met* 429.17–18.

⁵⁹ For the expression ‘τὸ ὅλον τοῦτο’ see above, p. 194 n. 107.

⁶⁰ Some commentators, noting that Porphyry speaks of differences as answering not just *ποῖον* but *ποῖον τι*, took the ‘*τι*’ as a sign that the quality in question was no ordinary one: see Arethas, *in Isag* 101.13–20. In fact the ‘*τι*’, like the ‘so-and-so’ in my translation, functions like a dummy letter: ‘An F of what sort?’.

⁶¹ See also e.g. *Phys* 226a28; *Met* 1020b14–16; 1048a26–27; and esp *Cat* 3b20 (above, p. 281), which encouraged the thought that it is the species, rather than or as well as the difference, which is a substantial quality. So, e.g., Boethius: ‘If man is rational, a substance will be rational. But rational is a quality. Hence second substances indicate a qualified substance [*qualem . . . substantiam*]’ (*in Cat* 195B). A passage from *ad Gedal* may be cited here. Boethius had worried lest matter and the composite turn out to be substances while ‘form will be outside substance and will fall under another predication—either quality or quantity or some other. Porphyry says that Boethius is mistaken here, because the *εἶδος* which is correlated with matter and which Aristotle calls substance is a quality and other than the accidents; for that which gives quality to a substance is substantial and therefore a substance—indeed, the compound is a substance especially in virtue of the form’ (58 = Simplicius, *in Cat* 78.18–24).

'Man is a qualified animal': that is to say, a man is an animal of a certain sort. A differential predicate picks out a quality—a substantial quality. That is to say, a differential predicate indicates what sort of so-and-so an item is.

It might be objected that the notion of a substantial quality is *ad hoc*. Thus Alexander:

Aristotle says that in one way the difference of a substance is called a qualified item; for when asked what sort or kind [*ποιόν τι καὶ ποταπόν*] of animal a man is, we mention some of the differences which hold of him, indicating that a difference is predicated not in answer to 'What is it?' but to 'What sort?'—but not in the same way as a quality. (*in Met* 399.2–5)

To say that differences are substantial qualities is not to say that they are qualities—except, of course, homonymously. Thus Plotinus, who refers to differences as 'substantial qualities' (*enn VI* iii 14.30–31), says this:

The differences which separate substances one from another are qualities homonymously, being rather actualities and accounts (or parts of accounts), and indicating what something is—even if they seem to express a qualified substance. (VI i 10.20–24; cf II vi 2.20–26)

In other words, 'substantial quality' does not name one of Aristotle's ten types of predication, and the orthodox position on the categorial status of differences says nothing about their categorial status.

Then what is that status? Alexander observes that 'perhaps the differences in each genus are in the same genus, i.e. the same type of predication' (*in Met* 206.22–23). He elaborated the point in his essay *On specific differences*.⁶² There he distinguished between primary or 'matterless' genera and secondary or enmattered genera: the differences of primary genera are simply identical with their species, and hence answer 'What is it?'; the differences of secondary genera belong to the highest genus to which their genus belongs—so that the difference of red will be a quality, the difference of man a substance, and so on. (See *diff spec* 9–12.) In the *Topics* Aristotle had remarked that 'of relative items the differences too are relative' (145a15): Alexander's thesis about secondary genera is the generalization of this dictum.⁶³

⁶² The essay survives only in Arabic: text, German translation, and Greek reconstruction in Dietrich, *Arabische Version*. There is another Arabic text (French translation in Badawi, *Transmission*, pp. 169–179) on the same subject: either a second essay by Alexander or a second version of the same essay (see Sharples, 'Alexander', p. 1188).

⁶³ It has been held that Alexander rejected the view that differences are substantial qualities, and replaced it by the theory that a difference belongs to the same category as the species and genera. (See Ellis, 'Alexander's defense', pp. 85–88.) True, Alexander once

And Porphyry subscribes to it:

The highest types of predication being ten, in each the genera and species and differences are otherlike; for the type to which a genus belongs will also be the type both of the species of the genus and of the differences of the genus and its species. (*in Cat* 82.25–29; cf 94.13–16)

A differential predicate of X need not be a quality of X: rather, it will be a predicate of the same type as the general and special predicates of X.

The theory is elegant; but it wants a reason in its favour. When the medical man Archigenes insisted that differences were qualities, Galen scoffed:

In fact the word 'difference' can be said of anything—of qualities and quantities and relatives and generally of anything whatever. For the word 'difference' comes from, and is understood in terms of, one item's differing from another. Some things differ from one another from the start, in the first genera of predication—for example, man and white and two cubit and right-hand: one of them is a substance, one a quality, one a quantity, one a relative, . . . (Galen, *diff puls* VIII 632)

One thing may differ from another in virtue of absolutely any sort of predicate: why suppose that all specific differences are qualities? Why suppose that there is any general answer to the question: To what type does a differential predicate belong?

The ancient texts which discuss these matters are often confusing and sometimes confused; but at bottom the issues are easy. Suppose that X is a differential predicate of Y. First, is X also a substantial or essential predicate of Y? Yes—and trivially so; for a specific difference is part of the essence or definition of its subject. Then is X an appropriate answer to the question 'What is Y?' Yes and No: Yes, if the question is taken to ask for defining features of Y; No, if it is taken to ask for a general or a special predicate. Secondly, is X an appropriate answer to the question 'What sort of so-and-so is Y?' Yes—and trivially so. Then does X express a quality of Y? Yes and No: Yes, if the term 'quality [$\piοιότης$]' is explained in terms of the question 'What sort of so-and-so [$\piοιόν τι$]?'; No, if quality is explained in terms of the *Categories*. Thirdly, does

claims that 'white' is predicated of snow not substantially but accidentally—white is an inseparable accident of snow (*in Top* 50.21–51.4). But in saying this he is defending an Aristotelian example (*Top* 120b19–121a9; 127b1–4); he is not rejecting substantial qualities.

X express a substantial quality of Y? Yes—and, again, trivially so.⁶⁴ Fourthly, to which of the ten Aristotelian types of predication does X belong? That depends on X and Y. (Suppose that Z is a general predicate of Y: to what type of predicate does it belong? That depends on Y . . .)

Why then the ancient fuss? In part, there was an exegetical problem. As Plotinus points out, Aristotle and his followers sometimes incautiously claim, or seem to claim, that a difference must express a quality. It is easy to take this to mean that if X is predicated differentially of anything, then it belongs to the type of predication which signals a quality. That interpretation raises difficulties. So what did Aristotle mean?

There were also two philosophical problems. The first is a problem about the nature of substances. It is stated thus by Ammonius:

From this [i.e. *Cat* 3a21] it is clear that Aristotle separates differences from substances. Hence it results that they are accidents—which is absurd. For Aristotle himself thinks that they are substances, so that from them species are completed and they are predicated substantially of species. For if they were not substances, substance would come about from non-substances, which is absurd. (*in Cat* 45.8–13)

A substance has a genus which is completed by a difference. The difference thus forms part of the substance. So a difference must itself be a substance. How can something which is not a substance be a part of a substance? (So too *ibid* 122.6–8.) On the other hand, how can one substance ‘complete’ another? Had not Aristotle announced that substances cannot compose substances (*Met* 1039a3–23)?⁶⁵

Porphyry rejected the latter doctrine, claiming that body and soul are both substances—and yet combine to make a different substance, the living organism (*Symm Zet* 260 = Nemesius, *nat hom* iii 139–140 [43.3–8]). Plotinus rejected the former doctrine, allowing that perceptible substances, not being genuine or full-blooded substances, may have

⁶⁴ Yet ‘no modern commentator to my knowledge accepts Porphyry’s solution’ to the question of the status of differences—which entails that ‘the differences of substance are in two categories at the same time—substance and quality’ (Morrison, ‘Statut des différences’, p. 154—what Morrison calls ‘Porphyry’s solution’ is what I have called the orthodox position). If the solution has such an entailment, then it is disastrous. But if X expresses a substantial quality of Y, it does not follow that it signifies a quality and it does not follow that it signifies a substance.

⁶⁵ There is a similar puzzle raised about parts: parts are relational items, and hence they are accidents. ‘But if parts of secondary substances are accidents, secondary substances themselves will be accidents; or, if this is unattractive, secondary substances will consist of parts which are accidents—which is impossible’ (Boethius, *in Cat* 234D).

non-substantial parts (*enn* VI iii 8.30–37). Neither point seemed satisfactory, and the problem lived on. Later, Syrianus discussed it, and claimed that it rests on an equivocation: there are mere qualities and there are substantial qualities; and the latter (unlike the former) are perfectly capable of being parts of substances. (See Asclepius, *in Met* 434.19–29.)

The problem is phoney. White, let us suppose, is a difference of snow: snow is white, and its colour is one of the things which differentiates it from coal and cochineal. You may say, if you like, that snow is ‘completed’ by whiteness or that whiteness is a ‘part’ of snow. But that means no less and no more than that snow is, essentially, white. Or again—and without the metaphorical parts: A man is a substance. A man is a rational animal. An animal is a substance. Rationality is a quality. Hence a man is a substance which consists of a substance and a quality. But that means only that a certain substance is a qualified substance—a substance of such and such a kind. Hot water is water which is hot. Heat is a quality. Hot water—if you like—consists of water plus heat. But it would be absurd to infer that there is something dodgy about hot water, something which makes hot water less respectable, from a metaphysical point of view, than plain water. Hot water is water. Water is a substance. So hot water is a substance—of a particular kind.

The second philosophical problem consists in a threat to the Aristotelian distinction between substances and accidents. Simplicius suggests that differences, being neither substances nor accidents,

are substantial qualities which complete the substance, or are midway between quality and substance, offering a common bond with accidents to substances and with substances to accidents. (*in Cat* 98.22–25)

Such intermediary items appealed to Platonists, who recalled the rôle of Eros in the *Symposium*. But they have been thought catastrophic for Aristotelians. Do they belong to two types of predication at once? Do they belong to no type of predication at all? Do they constitute a new, eleventh type? Or do they swell the tally to ten and a half, qualities being subdivided into the substantial and the accidental? The last option has seemed the least awful—and even so, Aristotle’s scheme begins to crack.⁶⁶

But substantial qualities are not to be construed as intermediary items, and the theory of substantial qualities has no disastrous consequences for

⁶⁶ I paraphrase Ellis, ‘Alexander’s defense’, p. 85; cf e.g. Bodéus, *Catégories*, p. 100, for the ‘two sorts of qualities’.

Aristotle. The only consequence it has for qualities is this: some qualities hold accidentally of certain items and substantially of others. Thus ‘hot’ holds accidentally of a red hot poker, substantially of fire; ‘white’ holds accidentally of my cricket flannels, substantially of snow.⁶⁷ There is nothing in this which threatens any Aristotelian doctrine.

(M) Epicurean accidents

‘Accidents are items which come and go without the destruction of their subjects’ (12.24–25). The pair of verbs ‘come and go [*γίνεσθαι*, *ἀπογίνεσθαι*]’ is not used to characterize accidents in any Greek text earlier than Porphyry. But there once were such texts—some of them on an unlikely shelf in the library.

The only genuine items existing in the world, according to the Epicureans, are bodies and empty space: anything else

either you will find to be a conjunct [*coniunctum*] of these two things or you will see to be an event [*eventum*] of them. A conjunct is something which can never be disjoined or separated without destruction—as weight for stones, heat for fire, liquidity for water, tangibility for all bodies, intangibility for empty space. Slavery, on the other hand, and poverty and wealth and freedom and war and peace and other items the coming and going [*adventus, abitus*] of which leaves the nature of the thing safe, these we usually and rightly call events. (Lucretius, I 449–458)

What Lucretius calls ‘events’ correspond to accidents—and perhaps were so labelled in the Epicurean Greek which lies behind the Latin text.⁶⁸ Their ‘coming and going’ corresponds to Porphyry’s ‘come and go’.

Coming and going is not the only Epicurean touch in Porphyry’s account of accidents. The distinction between separable and inseparable accidents was indeed Peripatetic: if it is not to be discovered in Aristotle, it may be spotted here and there in Alexander;⁶⁹ and it is close to the distinction between ordinary accidents and *per se* accidents, which is certainly Aristotelian. But the most striking texts on the topic are Epicurean.

⁶⁷ See above, p. 222.

⁶⁸ Epicurus, *ad Hdt* 70–71, is the Greek text nearest to this Lucretian passage; but it is corrupt and controverted—and in any event, contains nothing of Porphyrean pertinence.

⁶⁹ e.g. in *Met* 176.24–25; in *Top* 49.10–11; 177.15–17; later e.g. in Simplicius, in *Cat* 181.32–33; in *Phys* 128.11–19; Philoponus, in *Phys* 72.31–73.6; scholia to Dionysius Thrax, *GG* I iii 217.23–25; 361.8–11.

Talking of definition and the impossibility of defining man, Sextus says that

what is an accident of something is different from that of which it is an accident (if it did not differ, it would not be an accident but the item itself). Now of accidents, some are inseparable from the items of which they are accidents, as length and breadth and depth from bodies (for it is impossible to think of body without the presence of these things), and some are separable from that of which they are accidents and it remains when they change, as running and talking and sleeping and waking of man. (*M VII* 270–271)

The material is repeated in a later text:

In general, . . . of things which exist, some subsist in their own right and some are seen about items which subsist in their own right. Objects such as substances—say, bodies and empty space—subsist in their own right; about items which subsist in their own right are seen what they call accidents. Of these accidents, some are inseparable from the items of which they are accidents and some are of a nature such as to be separated from them. Inseparable from the items of which they are accidents are, say, resistance of body and yielding of empty space. For it is never possible to think of a body without resistance or of empty space without yielding—resisting is an eternal accident of the one and yielding of the other. Not inseparable from the items of which they are accidents are, say, motion and rest . . . (*M X* 220–222)

Sextus is discussing Epicurus' view of time, as it was interpreted by Demetrius of Laconia (*ibid* 219). Strictly speaking, Sextus does not say that the distinction between inseparable and separable accidents is taken from the Epicureans; but the 'they' in 'what they call accidents' can hardly be intended for anyone else, and—unless Sextus is leading us up the Garden path—the doctrines should be ascribed to the Epicurean School.

The distinction made here between inseparable and separable accidents answers to the Lucretian distinction between conjuncts and events. Hence it is not the same as the Porphyrean distinction between inseparable and separable accidents. Indeed, Porphyry's distinction is—roughly speaking—a distinction among two types of Epicurean separable accident.

Nevertheless, there is a striking similarity between the Epicurean text and Porphyry: both appeal to thinkability in order to determine accidenthood. For the Epicureans, thinkability distinguishes between separable and inseparable accidents. For Porphyry, it distinguishes the accidental from the non-accidental. But insofar as Porphyry's accidents are equivalent to Epicurean separable accidents, that difference is merely terminological.

What is to be concluded? Should we postulate Epicurean influence upon the *Introduction*? Did something Epicurean leach into the tradition on which Porphyry draws?

(N) Synonymous predication

Predication is transitive: if X is predicated of Y and Y is predicated of Z, then X is predicated of Z. This is trivial; and it follows immediately from a thesis which Aristotle states in the *Categories* and which Porphyry adopts at 7.8–19, namely the thesis that

(1) If Y is predicated of Z, then if X is predicated of Y, X is predicated of Z.⁷⁰

Aristotle expresses the thesis as follows:

When one item is predicated of a diverse item, then everything which is said of the predicate as of a subject will also be said of the subject. (*Cat* 1b10–12)

The phrase ‘as of a subject’ seems idle; for how could one thing be predicated of another not as a subject?

Yet ‘as of a subject’ was regarded by the Peripatetic tradition as an indispensable qualification to the thesis. Thus Alexander:

When an item is predicated of a diverse item as of a subject, whatever is said of the predicate will also be said of the subject—items which are said of something in answer to ‘What is it?’ are predicated of it as of a subject. (*in Top* 297.28–298.1)

Porphyry takes over this point and adds another:

He does not say simply ‘what is said of the predicate’; rather, in saying ‘when one item is predicated of a diverse item as of a subject’ he gives us to understand ‘synonymously and in answer to “What is it?”’. (*in Cat* 81.4–7)

Synonymous predication has just been explained:

What is predicated as of a subject is what, being more universal than the subject, can fit it both in respect of name and in respect of definition, i.e. can be said synonymously of the subject. Such items are genera and species. (*ibid* 80.20–23)⁷¹

⁷⁰ See above, pp. 144–145.

⁷¹ Cf 81.6–11; 92.25–35; 94.35–36 (where differences too are said to be predicated synonymously—cf Boethius, *in Cat* 191D). The thesis that predication as of a subject is synonymous predication is taken from *Cat* 2a19–34; the label ‘synonymous’ is not used there, but was perhaps suggested by 3a25–26 and 3b2–9.

Two items are synonyms, according to the *Categories*, if and only if they have both a name and its definition in common—if and only if some predicate is true of each of them in the same sense.⁷² And a predicate is said synonymously of an item if and only if both its name and its definition are said of the item—as both ‘man’ and ‘rational mortal animal’ are said of Socrates. Further, if something is predicated synonymously, it is predicated substantially or essentially—it gives an answer to ‘What is it?’.

Not all predicates answer ‘What is it?'; not all predicates are predicated synonymously: hence not all predicates are predicated ‘as of a subject'. For example:

It is not the case that what is predicated in any way at all is predicated as of a subject—in ‘Socrates walks' walking is predicated but not as of a subject. (Simplicius, *in Cat* 52.16–18)

(The same example in Porphyry, *in Cat* 80.5–8.) Aristotle's thesis at *Cat* 1b10–15 is not:

(1) If Y is predicated of Z, then if X is predicated of Y, X is predicated of Z,

but rather:

(2) If Y is predicated synonymously of Z, then if X is predicated synonymously of Y, X is predicated synonymously of Z.

It is not predication but synonymous predication which is transitive.

The commentators praise Aristotle for adding the qualification ‘as of a subject'. For thesis (1), they say, is false—it is the restricted thesis, (2) which is true. As Ammonius puts it,

he does well to say ‘as of a subject', in the sense of ‘substantially and objectively'. For if something is predicated accidentally of the predicate, it is not necessary that it also be said of the subject—genus is predicated accidentally and relationally of animal. (*in Cat* 31.9–12)

Man is an animal and animal is a genus: (1) would license the false conclusion that man is a genus; (2) does not permit the inference—for genus is not predicated synonymously of animal, it is not predicated of animal as of a subject. Another stock example: Socrates is white, white is a colour. Hence, by (1), Socrates is a colour? But white is not predicated synonymously of Socrates; so that (2) does not introduce the false conclusion.

⁷² See above, pp. 120–121.

There is something odd here. Simplicius repeats the Porphyrean claim that ‘being predicated synonymously and in answer to “What is it?” is what being said of a subject is’; he then rehearses the Aristotelian thesis; and he remarks that ‘thus we shall have the first mood of the first figure’ or a syllogism in Barbara (*in Cat* 51.30–52.9). In other words, he takes the Aristotelian thesis to limit the scope of Barbara—and hence of categorical syllogistic in general—to essential and synonymous predications. There is no hint of that in the *Analytics*.

Some Peripatetics had seen the point:

Notice that Andronicus and some others say that it is not only predicates in answer to ‘What is it?’ which are predicated as of a subject, but others too, for example ‘musical’ of Aristoxenus and ‘Athenian’ of Socrates—and perhaps those such that, when we predicate them of something, we say that it is exactly that which we predicate (in saying that Socrates walks we do not say that Socrates is walks, but we do say that he is Athenian and a philosopher). (Simplicius, *in Cat* 54.8–13)

According to Andronicus, X is predicated of Y as of a subject if and only if you can express the predication in the form ‘Y is X’. Since, according to the standard Peripatetic theory, every predication can be expressed in such a form (walking being predicated of Socrates in the sentence ‘Socrates is a walking item’),⁷³ the Andronicans implicitly make all predication predication ‘as of a subject’. Thesis (1) and thesis (2) are equivalent.

Then what of the catastrophic consequences which allegedly follow from (1)? Well, (1) does not make man a genus or Socrates a colour. ‘Genus’ is not predicated of ‘animal’: it is not the case that ‘genus’ is true of whatever ‘animal’ is true of. ‘White’ has different senses in ‘White is a colour’ and ‘Socrates is white’, and the inference to ‘Socrates is a colour’ is a fallacy of equivocation. (See Simplicius, *in Cat* 54.16–21—the point is also made, in all probability, in a corrupt passage in Porphyry’s own *in Cat*: see 124.4–14.)

Predication is unrestrictedly transitive. The thesis that it is not derives from an Aristotelian error. According to Aristotle,

of items which are in a subject [that is to say, of accidents], in most cases neither the name nor the account [the definition] is predicated of the subject; but in some cases nothing prevents the name from sometimes being predicated of the subject—although the account cannot be. For example, white, being in body as a subject, is predicated of its subject (a body is said to be white); but the account of white will never be predicated of the body. (*Cat* 2a19–34)

⁷³ See above, p. 74.

In substantial predication, name and definition are alike predicated of the subject. In accidental predication, this is not so: occasionally the name is predicated, but the definition is never predicated.

My shirt is accidentally white; that is to say, the colour white is in it as in a subject. According to Aristotle, the name of the colour, namely 'white', can be truly said of the shirt; but the definition of 'white' ('colour of such-and-such a sort') cannot. Hence white is not synonymously predicated of my shirt, not predicated of it as of a subject. Now it is true that the definition of 'white'—of the name of the colour white—is not predicated of my shirt. But neither is any name of that colour; for when I say 'My shirt is white', 'white' there does not name a colour.⁷⁴

In general, either all predication is 'as of a subject' or none is. If in the sentence

Socrates is wise

the predicate is the word 'wise' or the verbal expression 'is wise', then both the word and its definition are predicated of Socrates (or of 'Socrates'). If in the sentence

Socrates is a man

the predicate is the word 'man' or the verbal expression 'is a man', then both the word and its definition are predicated. On the other hand, if the predicate in

Socrates is wise

is wisdom (or 'wisdom'), then neither word nor definition is predicated; and if the predicate in

Socrates is a man

is humanity (or 'humanity'), then neither word nor definition is predicated.

(O) The Rules of Priority

Natural priority, to which Porphyry makes frequent appeal, was determined by two rules, a first formulation of which is this:⁷⁵

⁷⁴ Finding 'white' ill-chosen, Bodéus, *Catégories*, p. 91, suggests that 'slave' (or any other $\pi\tau\circ\delta\tau\pi\tau$) would be a better example. But both the name 'slave' and its definition are predicated of slaves.

⁷⁵ See above, p. 248.

- (1) Fs are prior to Gs if and only if F co-removes but is not co-removed by G.
- (2) Fs are prior to Gs if and only if F is co-introduced by but does not co-introduce G.

There is no explicit version of the rules in Aristotle; but they are implicit in his works.

Thus he uses the term ‘co-remove’ in connection with priority.⁷⁶ For example:

Those who define correctly define by genus and differences, and these items are better known and prior absolutely to the species—for the genus and the difference co-remove the species, so that they are prior to the species. (*Top* 141b25–29; cf 123a14–15)

And in the *Categories* Aristotle explains that correlatives are ‘simultaneous by nature’ by appeal to co-removal:

These items co-remove one another; for if there is no double there is no half, and if there is no half there is no double. (*Cat* 7b19–21)

Again:

If the knowable is removed, it co-removes knowledge, but knowledge does not co-remove the knowable; for if there is no knowable there is no knowledge . . ., but if there is no knowledge, nothing prevents there being something knowable. (*ibid* 7b27–31)

Similarly for the perceptible and perception (*ibid* 7b35–8a6). Co-removal—hence, in effect, rule (1)—is here invoked to ground particular cases of simultaneity and priority.⁷⁷

In his account of priority in general, Aristotle invokes not ‘co-removal’ but rather ‘implication of existence’, thus:

One thing is said to be prior to another in four ways. . . . Secondly, what does not convert with respect to implication of existence—as one is prior to two. For if two exist, it follows immediately that one exists, but if one exists it is not necessary that two exist. (*Cat* 14a26–32; cf *Met* 1019a1–4)

⁷⁶ Note also ‘συμφθείρειν’ at *Top* 150a33.

⁷⁷ Other appeals to co-removal at *Met* 1040a21–22; 1071a35; 1083b33–34; [Aristotle], *Met* 1059b30–31; 1059b38–1060a1.

The verb 'co-introduce' is not used;⁷⁸ but what Aristotle offers is equivalent to rule (2).

And so Simplicius is justified when he interprets *Cat* 14a26–32 by the conjunction of the two rules:

What is naturally prior co-removes but is not co-removed—for if the monad does not exist, the dyad does not exist, and if animals do not exist, men do not exist; but it is not the case that if the dyad is removed the monad too is thereby removed (for the monad, subsisting in its own right, does not depend for its existence on the dyad). On the other hand, what is secondary by nature has its implication not according to removal but according to existence; for what is secondary co-introduces the primary item with itself but is not co-introduced by it. For if the dyad exists, it is necessary for the monad too to exist, and if men exist it is necessary for animals to exist; but it is not the case that if the monad exists it is necessary for the dyad to exist nor that if animals exist it is necessary for men to exist. (*in Cat* 191.24–32)

It is plain that Aristotle took his appeals to co-removal and to implication of existence to be mutually equivalent, so that in effect he recognized the equivalence of (1) and (2).

The rules are found, singly or together, in several texts between Aristotle and Porphyry. Nicomachus argues, at *introd arith* I iv 2–v 2, that arithmetic is 'by nature earlier born [$\phi\gamma\sigma\epsilon\iota\pi\rho\gamma\epsilon\nu\epsilon\sigma\tau\epsilon\rho\alpha$] than the other sciences. He gives the rule of co-removal for determining priority, and then—like Simplicius—the rule of co-introduction for posterity. And he uses both rules together:

So arithmetic co-removes geometry but is not co-removed by it; and it is co-introduced by it but does not co-introduce it. (I iv 5)

Or Sextus: in an account of the 'Pythagorean' theory of first principles he observes that

every genus pre-exists [$\pi\rho\o\pi\pi\alpha\rho\chi\epsilon\iota$] the species ordered under it. For if it is removed, all the species are co-removed; but if the species is removed, the genus is not removed. For the former depends on the latter and not *vice versa*. (*M* X 269)

⁷⁸ 'συνεπιφέρειν' is found, in the pertinent sense, at *APr* 52b7; *Top* 144b16–18, 28–30 (above, p. 349); but it is not explicitly connected with priority. The connection is made e.g. by Alexander, in *Top* 437.2–4; Sextus, *PH* II 165.—The background is Plato, *Phaedo* 104E–105A: note that at in *APr* 272.7 Alexander paraphrases Plato's 'ἐπιφέρει' by 'συνεπιφέρει'.—Late variants on 'συνεπιφέρειν' are 'συνεξακούειν' and 'συνίστασθαι': scholia to Dionysius Thrax, *GG* I iii 193.23–37, 235.9–36.

Or Alexander, who glosses *Met* 1019a1–4 in terms of co-removal (*in Met* 387.5–12), and who makes frequent use of the rules himself.⁷⁹

⁷⁹ See e.g. *in Top* 437.2–4; *quaest* i 11a [23.11–15]. For Alexander's use of the 'removal argument' see de Libera, *Art*, pp. 57–66 and pp. 168–174 (citing Quintilian, X v 57: above, p. 252). De Libera suggests that Porphyry learned the argument from Alexander and that Alexander canonized it. Neither suggestion is plausible.—See also e.g. [Aristotle], *div* 65; Anatolius, *apud* [Iamblichus], *theol arith* ii 12; Iamblichus, *comm math sc* iv [14.24–26]; *in Nicom arith* 10.2–6.

TEXTUAL NOTES

I depart from Busse's texts in the following passages. The commentary explains why.

1.21: omit *καὶ* before *πλήθους*.
1.22: add *παρά* before *τὴν . . . οἰκειότητα*.
2.10: *φαμέν* (Arethas) for *ἔφαμεν*.
2.24: omit *ἀποδοθέντα*.
3.8-9: omit *ἔρωτησάντων . . . κατηγορεῖται*.
3.15: omit *αὐτό*.
3.19: *ἔκάστον* for *ἔκαστον*.
3.20: omit *τῆς ἐννοίας* (Boethius).
4.7: omit *ἀποδοθέν* (Boethius).
4.8: omit *ἔκατέρον* *ἔκατέρου* (Ammonius, Boethius).
4.32: *προσεχέσ* *ἐστι* (Boethius, David) for *προσεχῶς κατηγορούμενον*.
5.3: add *ἄλλο* after *ἔστιν* (Boethius).
5.3: omit *εἰς εἴδη* (Boethius).
5.4: omit *καὶ τουτὶ τὸ λευκόν* (Boethius).
5.10: omit *τὸ ἀνωτάτω*.
5.13: omit *μέν* (Boethius).
5.14: omit *ἄλλοιαν* (Boethius).
5.15: omit second *λέγεται* (Boethius).
5.23: *δέ* (MSS) for *δή*.
6.1: lacuna before *ώς*.
6.6: *τι* for *τό*.
6.18: omit *εἰς ἐν* (Boethius).
7.12: *γάρ* (Boethius) for *οὖν*.
7.20: add *καὶ ὁ* before *Σωφρονίσκου*.
7.24: omit *αἱ αὐταί* (Boethius).
8.17: omit *ποιότητι*.
9.1: after *ἐποίησεν* add *καὶ εἶδος τοῦ ζώου ἐποίησεν* (Boethius).
9.6: *ἔχειν* for *ἔχοντος*.
9.16: *λέγονται* (Boethius) for *λαμβάνονται*.
10.11: omit *τῇ* before *τοῦ ἀλόγου*.
10.12: *τοῦ λογικοῦ καὶ τοῦ θνητοῦ* (Boethius) for *τοῦ θνητοῦ καὶ τοῦ λογικοῦ*.
12.16: omit second *παντί* (Boethius).

16.3: omit *ἀτόμων* (Boethius).

17.15: add *ἄλλων* before *τεττάρων* (Boethius).

17.16: add *ἄλλων* before *τεττάρων* (Boethius).

17.18–19: *δευτέρων . . . τρίτων . . . τετάρτων . . . πέμπτων* (Boethius)
for *δύο . . . τριῶν . . . τεττάρων . . . πέντε*.

17.23: *οὖν* (Boethius) for *δέ*.

18.2: omit second *καὶ*.

19.14: *ἔστι* (Boethius) for *ἄν γ*.

20.14: *τε πάρεστι* (MSS) for *τε γάρ ἔστι*.

20.17: add *καί* after *δύναται* (Boethius).

22.8: *ἔτι* (MSS) for *διό*.

22.8: omit *καὶ ἔστιν ἐπίσης*.

PORPHYRY'S REMAINS

(1) The *Introduction*

Text

A. Busse (ed): *Porphyrii Isagoge*, *Commentaria in Aristotelem Graeca IV 1* (Berlin, 1887)

Translations

Latin:

Boethius: ed L. Minio-Paluello, *Porphyrii Isagoge translatio Boethii*, *Aristoteles Latinus I 6–7* (Bruges, 1966)

English:

E. W. Warren: *Porphyry the Phoenician: Isagoge* (Toronto, 1975)

P. V. Spade: *Five Texts on the Mediaeval Problem of Universals: Porphyry, Boethius, Abelard, Duns Scotus, Ockham* (Indianapolis, 1994)

French:

J. Tricot: *Porphyre: Isagoge* (Paris, 1947)

A. de Libera and A.-P. Segonds: *Porphyre: Isagoge* (Paris, 1998)

German:

E. Rolfes: *Porphyrius: Einleitung in die Kategorien*, in *Aristoteles: Organon I/II* (Hamburg, 1925²)

H. G. Zekl: *Porphyrios: Einführung in die Kategorien des Aristoteles*, in *Aristoteles: Organon 2* (Darmstadt, 1998)

Italian:

B. Maioli: *Porfirio: Isagoge*, *Studium Sapientiae 9* (Padua, 1969)

G. Girgenti: *Porfirio: Isagoge*, *Testi a fronte 15* (Milan, 1995)

Ancient Commentaries

al-Tayyib: in Gyekye, *Arabic Logic*

Ammonius: ed A. Busse, *Ammonius: in Porphyrii Isagogen sive V Voces, Commentaria in Aristotelem Graeca IV 3* (Berlin, 1891)

anon: ed P. Moraux, 'Ein unedierter Kurzkommentar zu Porphyrios' Isagoge', *Zeitschrift für Papyrologie und Epigraphik* 35, 1979, 55–98; 41, 1981, 59–61

anon Syriac: in Baumstark, *Aristoteles bei den Syrern*, pp. 227–257

Arethas: ed M. Share, *Arethas of Caesarea's Scholia on Porphyry's Isagoge and Aristotle's Categories (Codex Vaticanus Urbinas Graecus 35)*, *Corpus philosophorum medii aevi: commentaria in Aristotelem byzantina 1* (Athens, 1994)

Boethius: ed S. Brandt, *Anicij Manlii Severini Boethii in Isagogen Porphyrii commenta*, Corpus Scriptorum Ecclesiasticorum Latinorum XXXVIII 1 (Vienna, 1906)

David: ed A. Busse, *Davidis Prolegomena et in Porphyrii Isagogen commentarium*, Commentaria in Aristotelem Graeca XVIII 2 (Berlin, 1904)

Elias: ed A. Busse, *Eliae in Porphyrii Isagogen et Aristotelis Categories commentaria*, Commentaria in Aristotelem Graeca XVIII 1 (Berlin, 1900)

[Elias]: ed L. G. Westerink, *Pseudo-Elias (Pseudo-David)*: *Lectures on Porphyry's Isagoge* (Amsterdam, 1967)

Philoponus: in Baumstark, *Aristoteles bei den Syrern*, pp. 177–181, 192–210, 219–223

[Philoponus]: ed C. A. Brandis, *Scholia in Aristotelem*, Aristotelis Opera IV (Berlin, 1836), pp. 10–12

Probus: in Baumstark, *Aristoteles bei den Syrern*, pp. 148–156

Theodorus Prodromus, *Xenarchus*: ed J. A. Cramer, *Anecdota Oxoniensia* III (Oxford, 1836), pp. 204–215

(2) Other works

Fragments of most of the lost works of Porphyry are collected in:

A. SMITH (ed), *Porphyrii philosophi fragmenta* (Leipzig, 1993)

References to these fragments are given by abbreviated title (or by the word 'frag' when no title is known) and item-number in Smith. The source of the fragment is always indicated.

Smith's collection omits several titles, among them *ad Aneb, quaest Hom, in Tim*, for which there are separate editions. Note also:

O. BALLÉRIEUX: 'Porphyre et Aristote—quelques fragments à ajouter aux *Porphyrii philosophi fragmenta* d'Andrew Smith', in Motte and Denooz, *Aristotelica secunda*, pp. 221–231.

C. K. CALLANAN: 'A rediscovered text of Porphyry on mystic formulae', *Classical Quarterly* 45, 1995, 215–230.

abst [*On Abstinence*]:

J. BOUFFARTIGUE, M. PATILLON, and A. P. SEGONDS (edd), *Porphyre: de l'Abstinence* (Paris, 1977–1995)

ad Aneb [*Letter to Anebo*]:

A. R. SODANO (ed), *Porfirio: lettera ad Anebo* (Naples, 1958)

de an [*On the Soul*]:

in Smith, *Fragmenta*, pp. 259–268

an fac [*On the Faculties of the Soul*]:

in Smith, *Fragmenta*, pp. 268–278

ant nymph [*Cave of the Nymphs*]:

Seminar Classics 609 (ed), *Porphyry: The Cave of the Nymphs in the Odyssey*, Arethusa Monographs (Buffalo NY, 1969)

in *Cat* [Commentary on the *Categories*]:

A. BUSSE (ed), *Porphyrii in Aristotelis Categorias expositio per interrogationem et responsionem*, Commentaria in Aristotelem Graeca IV 1 (Berlin, 1887)

Against the Christians:

A. VON HARNACK (ed), *Porphyrius*, 'Gegen die Christen', 15 Bücher, Abhandlungen der königlich preussischen Akademie der Wissenschaften 1916, phil.-hist. Klasse 1 (Berlin, 1916)¹

ad *Gedal* [Commentary on the *Categories* to *Gedalius*]:

in Smith, *Fragmenta*, pp. 35–59

de *imag* [On Images]:

in Smith, *Fragmenta*, pp. 407–435

in *Int* [Commentary on the *de Interpretatione*]:

in Smith, *Fragmenta*, pp. 59–112

ad *Marc* [Letter to *Marcella*]:

W. PÖTSCHER (ed), *Porphyrios: ΠΡΟΣ ΜΑΡΚΕΛΛΑΝ*, Philosophia Antiqua 15 (Leiden, 1969)

nost potest [On what is up to us]:

in Smith, *Fragmenta*, pp. 295–308

phil hist [Philosophical History]

in Smith, *Fragmenta*, pp. 220–248

philolog [Philological lectures]:

in Smith, *Fragmenta*, pp. 478–486

in *Phlb* [Commentary on the *Philebus*]

in Smith, *Fragmenta*, pp. 199–202

in *Phys* [Commentary on the *Physics*]:

in Smith, *Fragmenta*, pp. 120–159

v *Plot* [Life of Plotinus]:

P. HENRY and H.-R. SCHWYZER (edd), *Plotini Opera* I (Oxford, 1964), pp. 1–38

in *Ptol harm* [Commentary on Ptolemy's *Harmonics*]:

I. DÜRING (ed), *Porphyrios: Kommentar zur Harmonielehre des Ptolemaios*, Göteborgs Högskolas Årsskrift 38 (Göteborg, 1932)

in *Ptol tetrab* [Introduction to Ptolemy's *Tetrabiblos*]:

A. BOER and S. WEINSTOCK (edd), *Porphyrii philosophi introductio in Tetrabiblum Ptolemaei*, Catalogus Codicorum Astrologorum Graecorum 5: codicum romanorum pars iv (Brussels, 1940)

¹ Very few of the hundred and more texts printed by von Harnack are fragments of Porphyry. Of numerous claims to have increased von Harnack's haul of actual citations, the only success is: G. Binder, 'Eine Polemik des Porphyrios gegen die allegorische Auslegung des Alten Testaments durch die Christen', *Zeitschrift für Papyrologie und Epigraphik* 3, 1968, 81–95.

v *Pythag* [*Life of Pythagoras*]:

A. NAUCK (ed), *Porphyrii philosophi Platonici opuscula selecta* (Leipzig, 1886), pp. 17–52

quaest Hom [*Homeric Questions*]:²

A. R. SODANO (ed), *Porphyrii quaestionum Homericarum liber I* (Naples, 1970) *reg anim* [*Return of the Soul*]:

in Smith, *Fragmenta*, pp. 319–350

scire te ipsum [*Know Yourself*]:

in Smith, *Fragmenta*, pp. 308–313

sent [*Sentences*]:

E. LAMBERZ (ed), *Porphyrii sententiae* (Leipzig, 1975)

in Soph [*Commentary on the Sophist*]:

in Smith, *Fragmenta*, pp. 164–195

de Styge [*On the Styx*]:

in Smith, *Fragmenta*, pp. 442–461

Symm Zet [*Miscellaneous Inquiries*]:

in Smith, *Fragmenta*, pp. 278–292

syn rhet [*Collection of Rhetorical Inquiries*]:

in Smith, *Fragmenta*, p. 489

in Tim [*Commentary on the Timaeus*]:

A. R. SODANO (ed), *Porphyrii in Platonis Timaeum commentariorum fragmenta* (Naples, 1964)³

(3) Dubious and spurious works

anon, *in Parm* [*Commentary on the Parmenides*]:

A. LINGUITI (ed), *Commentarium in Platonis Parmenidem*, Corpus dei papiri filosofici greci e latini III (Florence, 1995), pp. 63–202⁴

[Aristotle], *Theology*:

F. DIETERICI, *Die sogenannte Theologie des Aristoteles* (Leipzig, 1883)⁵

² ‘*quaest Hom Iliad*’ and ‘*quaest Hom Odyss*’ refer to the generous collection of scholia published in: H. Schrader (ed), *Porphyrii quaestionum Homericarum ad Iliadem pertinentium reliquiae* (Leipzig, 1882); H. Schrader (ed), *Porphyrii quaestionum Homericarum ad Odysseam pertinentium reliquiae* (Leipzig, 1890). Add items 384–406 in Smith, *Fragmenta* (pp. 468–478).

³ Add item 172 in Smith, *Fragmenta* (p. 198).

⁴ The work is ascribed to Porphyry by P. Hadot, ‘Commentaire de Porphyre’; *Porphyre*, I, pp. 102–143 (with II, pp. 60–113, for text, translation and commentary); see also Saffrey, ‘Connaissance’. Against the ascription see e.g. Bechtle, *Anonymous Commentary*; and note P. Hadot, ‘Porphyre et Victorinus’.—For Porphyry’s *in Parm* see Smith, *Fragmenta*, pp. 195–197.

⁵ The Arabic text begins thus: ‘The book of the philosopher Aristotle, called *Theology* in Greek, treats the doctrine of the supremacy of God and is explained by Porphyry of Tyre’. See e.g. Walzer, ‘Porphyre’, pp. 296–297; Aouan, ‘Théologie d’Aristote’; Genequand, ‘Théologie d’Aristote’.

[Galen], *ad Gaur* [*To Gaurus*]:

K. KALBFLEISCH (ed), *Die neuplattonische, fälschlich dem Galen zugeschriebene Schrift Πρὸς Γαῦρον περὶ τοῦ πῶς ἐμψυχοῦται τὰ ἔμβρυα* (Berlin, 1895)⁶ [Porphyry], *On Accentuation*:

A. HILGARD (ed), in *Grammatici Graeci* I iii (Leipzig, 1901), pp. 126–150⁷

⁶ *ad Gaur* is ascribed to Galen in the sole MS, and the attribution to Porphyry made by Kalbfleisch is plausible rather than certain.

⁷ For possible traces of a *Commentary on the Chaldaean Oracles* see P. Hadot, *Porphyre*, II, pp. 13–57.—The *Chronica* is in all probability a phantom; and the testimonies collected in F. Jacoby, *Die Fragmente der griechischen Historiker* IIB (Berlin, 1926), pp. 1198–1207, 1213–1220, relate rather to some other Porphyrean work or works.

BIBLIOGRAPHY

The Bibliography lists items referred to in the Introduction and the footnotes. (Asterisked items are to be found in ‘Porphyry’s Remains’.) There is a full bibliography in Girgenti, *Porfirio*; which may be complemented by the annual listings in *Elenchos*.

AA. VV.: *Raccolta di scritti in onore di Giacomo Lumbroso (1844–1925)*, *Aegyptus* suppt 3 (Milan, 1925).

AA. VV.: *Recherches sur la tradition platonicienne*, Entretiens Hardt 3 (Vandœuvres, 1957).

AA. VV.: *Porphyre*, Entretiens Hardt 12 (Vandœuvres, 1966).

AA. VV.: *Le Néoplatonisme* (Paris, 1971).

AA. VV.: *Plotino e il neoplatonismo in oriente e in occidente*, Problemi attuali di scienza e di cultura 198 (Rome, 1974).

AA. VV.: *Aristotelica—mélanges offerts à Marcel de Corte*, Cahiers de philosophie ancienne 3 (Brussels, 1985).

AA. VV.: *Energeia: études aristotéliciennes offertes à Mgr Antonio Jannone*, Centre international d’études platoniciennes et aristotéliciennes 1 (Paris, 1986).

AA. VV.: *Mélanges en hommage au professeur et au penseur libanais Farid Jabre*, Publications de l’université libanaise, section des études philosophiques et sociales 20 (Beirut, 1989).

AA. VV.: *Methexis: études néoplatoniciennes présentées au professeur E.A. Moutsopoulos* (Athens, 1992).

A. ALBERTI (ed): *Logica, mente e persona: studi sulla filosofia antica*, Accademia Toscana di scienze e lettere ‘La Colombaria’: studi 110 (Florence, 1990).

K. A. ALGRA, P. W. VAN DEN HORST, and D. T. RUNIA (edd): *Polyhistor: studies in the history and historiography of ancient philosophy presented to Jaap Mansfeld on his sixtieth birthday*, *Philosophia Antiqua* 72 (Leiden, 1996).

I. ANGELELLI and M. CEREZO (edd): *Studies on the History of Logic* (Berlin, 1996).

J. ANNAS and J. BARNES: *Sextus Empiricus: Outlines of Scepticism* (Cambridge, 2000²).

P. ANTON: ‘Plotinus’ approach to categorical theory’, in Harris, *Neoplatonism*, pp. 83–99.

A. H. ARMSTRONG (ed): *The Cambridge History of Later Greek and Early Mediaeval Philosophy* (Cambridge, 1970).

M. ASPER: ‘Zu Struktur und Funktion eisagogischer Texte’, in Kullmann, Althoff and Asper, *Gattungen*, pp. 309–340.

M. ASZTALOS: ‘Boethius as a transmitter of Greek logic to the Latin West: the *Categories*’, *Harvard Studies in Classical Philology* 95, 1993, 367–407.

P. AUBENQUE: ‘Plotin et Dexippe, exégètes des *Catégories* d’Aristote’, in AA. VV., *Aristotelica*, pp. 7–40.

P. AUBENQUE (ed): *Concepts et catégories dans la pensée antique* (Paris, 1980) .

M. AOUAD: 'La théologie d'Aristote', in Goulet, *Dictionnaire I*, pp. 544–570.

A. BADAWI: *La transmission de la philosophie grecque au monde arabe*, Etudes de philosophie médiévale LVI (Paris, 1987²).

D. M. BALME: 'Γένος and εἶδος in Aristotle's biology', *Classical Quarterly* 12, 1962, 81–98.

D. M. BALME: 'Aristotle's use of division and differentiae', in Gotthelf and Lennox, *Philosophical Issues*, pp. 69–89.

D. C. BALTZLY: 'Who are the mysterious dogmatists of *Adversus mathematicos* ix 352?', *Ancient Philosophy* 18, 1998, 145–170.

J. BARNES: 'Property in Aristotle's *Topics*', *Archiv für Geschichte der Philosophie* 52, 1970, 136–155.

J. BARNES: 'La doctrine du retour éternel', in Brunschwig, *Les stoïciens*, pp. 3–20.

J. BARNES: 'Bits and pieces', in Barnes and Mignucci, *Matter*, pp. 223–294.

J. BARNES: *The Tools of Scepticism* (Cambridge, 1990).

J. BARNES: 'Metacommentary', *Oxford Studies in Ancient Philosophy* 10, 1992, 267–281.

J. BARNES: 'Logical form and logical matter', in Alberti, *Logica*, pp. 7–119.

J. BARNES: *Aristotle: Posterior Analytics* (Oxford, 1994²).

J. BARNES: 'Grammar on Aristotle's terms', in Frede and Striker, *Rationality*, pp. 175–202.

J. BARNES: 'The catalogue of Chrysippus' logical works', in Algra *et al.*, *Polyhistor*, pp. 169–184.

J. BARNES and M. MIGNUCCI (edd): *Matter and Metaphysics, Elenchos* suppt 14 (Naples, 1988).

J. BARNES, S. BOBZIEN, K. FLANNERY, and K. IERODIAKONOU: *Alexander of Aphrodisias: On Aristotle, Prior Analytics 1.1–7*, Ancient Commentators on Aristotle (London, 1991).

J. BARNES and M. GRIFFIN (edd): *Philosophia Togata II: Plato and Aristotle at Rome* (Oxford, 1997).

A. BAUMSTARK: *Aristoteles bei den Syrern vom V.–VIII. Jahrhundert* (Leipzig, 1900).

G. BECHTLE: *The Anonymous Commentary on Plato's 'Parmenides'*, Berner Reihe philosophischer Studien 22 (Bern, 1999).

E. BERTI (ed): *Aristotle on Science: the 'Posterior Analytics'*, *Studia Aristotelica* 9 (Padua, 1981).

R. BEUTLER: 'Porphyrios (21)', *Pauly–Wissowa's Realencyclopädie der klassischen Altertumswissenschaft* 22 (Stuttgart, 1953), coll. 275–313.

J. BIDEZ: *Vie de Porphyre*, Recueil de travaux publiés par la Faculté de philosophie et de lettres de l'Université de Gand 43 (Ghent, 1913).

J. BIDEZ: 'Boèce et Porphyre', *Revue belge de philosophie et d'histoire* 2, 1923, 189–201 = Fuhrmann and Gruber, *Boethius*, pp. 133–145.

T. BIRT: *Das antike Buchwesen in seinem Verhältnis zur Literatur* (Berlin, 1882).

H. J. BLUMENTHAL: 'Pseudo-Elias and the *Isagoge* commentaries again', *Rheinisches Museum* 124, 1981, 188–192.

I. BOCHENSKI: *Formale Logik*, Orbis Academicus (Fribourg, 1956).

R. BODÉUS: *Aristote: Catégories* (Paris, 2001).

H. BONITZ: *Index Aristotelicus* (Berlin, 1870).

V. BOUDON: 'Galen de Pergame', in Goulet, *Dictionnaire* III, pp. 440–466.

L. BRISSON: 'Notice sur les noms propres', in Brisson *et al*, *Porphyre* I, pp. 51–142.

L. BRISSON AND M. Patillon: 'Longinus Platonicus philosophus', in Haase, *Aufstieg* II 36.7, pp. 5214–5299.

L. BRISSON, M.-O. GOULET-CAZÉ, R. GOULET, and D. O'BRIEN: *Porphyre: La Vie de Plotin* I and II, *Histoire des doctrines de l'antiquité classique* 6 and 16 (Paris, 1982, 1992).

S. P. BROCK: 'Some notes on the Syriac translations of Porphyry's *Eisagoge*', in AA. VV., *Jabre*, pp. 41–50.

S. P. BROCK: 'The Syriac commentary tradition', in Burnett, *Glosses and Commentaries*, pp. 3–18.

J. BROWN and W. P. STONEMAN (edd): *A Distinct Voice: medieval studies in honor of Leonard E. Boyle O.P.* (Notre Dame IN, 1997).

J. BRUNSCHWIG: *Aristote: Topiques (livres I–IV)* (Paris, 1967).

J. BRUNSCHWIG: 'Remarks on the Stoic theory of the proper noun', in Brunschwig, *Papers*, pp. 39–56¹.

J. BRUNSCHWIG: 'Sur le système des "prédictables" dans les *Topiques* d'Aristote', in AA. VV., *Energeia*, pp. 145–157.

J. BRUNSCHWIG: 'The Stoic theory of the supreme genus and Platonic ontology', in Brunschwig, *Papers*, pp. 92–157².

J. BRUNSCHWIG: 'L'*Organon*', in Goulet, *Dictionnaire* I, pp. 482–502.

J. BRUNSCHWIG: 'Note sur la conception aristotélicienne de l'accident', in AA. VV., *Methexis*, pp. 67–80.

J. BRUNSCHWIG: *Papers in Hellenistic Philosophy* (Cambridge, 1994).

J. BRUNSCHWIG (ed): *Les stoïciens et leur logique* (Paris, 1978).

C. BURNETT (ed): *Glosses and Commentaries on Aristotelian Logical Texts*, Warburg Institute Surveys and Texts 22 (London, 1993).

A. BUSSE: *Die neuplatonischer Ausleger der Isagoge*, Wissenschaftliche Beilage zum Programm des Friedrichs–Gymnasium zu Berlin (Berlin, 1892).

¹ Original French version: 'Remarques sur la théorie stoïcienne du nom propre', *Histoire Epistémologie Langage* 6, 1984, 3–19.

² Original French version: 'La théorie stoïcienne du genre supérieur et l'ontologie platonicienne', in Barnes and Mignucci, *Matter*, pp. 19–127.

B. CENTRONE: 'Pseudo-Archytas', in Goulet, *Dictionnaire I*, pp. 342–345.

H. CHADWICK: *Boethius: the consolations of music, logic, theology, and philosophy* (Oxford, 1981).

R. CHIARADONNA: 'L'interpretazione della sostanza aristotelica in Porfirio', *Elenchos* 17, 1996, 55–94.

R. CHIARADONNA: 'Essence et prédication chez Porphyre et Plotin', *Revue des sciences philosophiques et théologiques* 82, 1998, 577–606.

R. CHIARADONNA: 'La teoria dell' individuo in Porfirio e l'*ΙΔΙΩΣ ΠΤΟΙΟΝ* stoico', *Elenchos* 21, 2000, 303–331.

R. CHIARADONNA: *Sostanza Movimento Analogia: Plotino critico di Aristotele*, *Elenchos* suppt 37 (Naples, 2002).

C. CHIESA and L. FREULER (edd): *Méta physiques médiéva les: études en honneur d'André de Muralt*, Cahiers de la Revue de théologie et de philosophie 20 (Geneva, 1999).

P. COURCELLE: *Les lettres grecques en Occident de Macrobe à Cassiodore* (Paris, 1943).

J.-F. COURTINE: 'Note complémentaire pour l'histoire du vocabulaire de l'être (les traductions latines d'*ΟΥΣΙΑ* et la compréhension romano-stoïcienne de l'être)', in Aubenque, *Concepts*, pp. 33–87.

G. M. DE DURAND: 'L'homme raisonnable mortel: pour l'histoire d'une définition', *Phoenix* 27, 1973, 328–344.

F. A. J. DE HAAS: *John Philoponus' New Definition of Prime Matter: aspects of its background in Neoplatonism and the ancient commentary tradition*, *Philosophia Antiqua* 69 (Leiden, 1997).

F. A. J. DE HAAS: 'Did Plotinus and Porphyry disagree on Aristotle's *Categories*?', *Phronesis* 46, 2001, 492–526.

A. DE LIBERA: *La Querelle des universaux de Platon à la fin du Moyen Âge* (Paris, 1996).

A. DE LIBERA: *L'Art des généralités—théories de l'abstraction* (Paris, 1999).

A. DE LIBERA: 'Entre Aristote et Plotin: l'*Isagoge* de Porphyre et le problème des catégories', in Chiesa and Freuler, *Méta physiques*, pp. 7–27.

J. D. DENNISTON: *The Greek Particles* (Oxford, 1959²).

A. DIETRICH: 'Die arabische Version einer unbekannten Schrift des Alexander von Aphrodisias über die *Differentia specifica*', *Nachrichten der Akademie der Wissenschaften in Göttingen*, phil.-hist. Klasse 1964, 2, 87–148.

J. DILLON: *Dexippus—On Aristotle, Categories*, Ancient Commentators on Aristotle (London, 1990).

H. DÖRRIE: 'Yπόστασις: Wort- und Bedeutungsgeschichte', *Nachrichten der Akademie der Wissenschaften in Göttingen*, phil.-hist. Klasse 1955, 1, 35–92.

H. DÖRRIE: *Porphyrios' "Symmikta Zetemata"*, *Zetemata* 20 (Munich, 1959).

H. DÖRRIE and M. BALTES: *Der Platonismus in der Antike: Grundlagen—System—Entwicklung*: 2—*Der hellenistische Rahmen des kaiserzeitlichen Platonismus* (Stuttgart/Bad Cannstatt, 1990).

H. DÖRRIE and M. BALTES: *Der Platonismus in der Antike: Grundlagen—System—Entwicklung: 4—Die philosophische Lehre des Platonismus* (Stuttgart/Bad Cannstatt, 1996).

J. DUFFY and J. PERADOTTO (edd): *Gonimos: Neoplatonic and Byzantine studies presented to Leendert G. Westerink at 75* (Buffalo NY, 1988).

S. Ebbesen: *Commentaries and Commentators on Aristotle's Sophistici Elenchi: a study in post-Aristotelian ancient and medieval writings on fallacies*, Corpus latinum commentariorum in Aristotelem graecorum VII (Leiden, 1981).

S. EBBESEN: 'Porphyry's legacy to logic', in Sorabji, *Aristotle Transformed*, pp. 141–171 = Ebbesen, *Commentators and Commentaries*, I pp. 133–170.

S. EBBESEN: 'Boethius as an Aristotelian scholar', in Wiesner, *Aristoteles*, pp. 286–311 = Sorabji, *Aristotle Transformed*, pp. 373–391.

T. EBERT: 'Aristotelischer und traditioneller Akzidenzbegriff', in Patzig *et al.*, *Logik*, pp. 338–349.

T. EBERT: 'Gattungen der Prädikate und Gattungen des Seienden bei Aristoteles: zum Verhältnis von *Kat.* 4 und *Top.* I 9', *Archiv für Geschichte der Philosophie* 67, 1985, 113–138.

T. EBERT: 'Aristotelian accidents', *Oxford Studies in Ancient Philosophy* 16, 1998, 133–159.

J. ELLIS: 'Alexander's defense of Aristotle's categories', *Phronesis* 39, 1995, 69–89.

C. EVANGELIOU: 'Aristotle's doctrine of predicables and Porphyry's *Isagoge*', *Journal for the History of Philosophy* 23, 1985, 15–34.

C. EVANGELIOU: 'The Aristotelianism of Averroes and the problem of Porphyry's *Isagoge*', *ΦΙΛΟΣΟΦΙΑ* 15/16, 1985/6, 318–331.

C. EVANGELIOU: 'The Plotinian reduction of Aristotle's categories', *Ancient Philosophy* 7, 1987, 147–162 = Preus and Anton, *Aristotle's Ontology*, pp. 47–67.

C. EVANGELIOU: *Aristotle's Categories and Porphyry*, *Philosophia Antiqua* 48 (Leiden, 1988).

A. FALCON: 'Aristotle's rules of division in the *Topics*: the relationship between genus and differentia in a division', *Ancient Philosophy* 16, 1996, 377–387.

A. FALCON: 'Aristotle's theory of division', in Sorabji, *Aristotle and After*, pp. 127–146.

J.-M. FLAMAND: 'Apulée de Madaure', in Goulet, *Dictionnaire I*, pp. 298–317.

M. FREDE and G. STRIKER (edd): *Rationality in Greek Thought* (Oxford, 1996).

M. FUHRMANN: *Das systematische Lehrbuch: ein Beitrag zur Geschichte der Wissenschaften in der Antike* (Göttingen, 1960).

M. FUHRMANN and J. GRUBER (edd): *Boethius*, *Wege der Forschung* 483 (Darmstadt, 1984).

G. FURLANI: 'Un trattato di Sergio di Res'ayna sopra il genere, le specie et la singolarità', in AA. VV., *Lumbroso*, pp. 36–44.

C. GENEQUAND: 'La mémoire et l'âme: Porphyre et la *Théologie d'Aristote*', *Bulletin d'études orientales* 48, 1996, 103–113.

S. GERSH: 'Boethius', in Goulet, *Dictionnaire* II, pp. 117–122.

A. A. GHORAB: 'The Greek commentators on Aristotle quoted in al-Amiri's "as-Sa'āda wa'l-Is'ād"', in Stern et al., *Islamic Philosophy*, pp. 77–88.

G. GIRGENTI: *Porfirio negli ultimi cinquant'anni*, Temi metafisici e problemi del pensiero antico: studi e testi 35 (Milan, 1994).

P. P. F. GONZÁLEZ: 'Cornutus', in Goulet, *Dictionnaire* II, pp. 460–473.

A. GOTTHELF and J. G. LENNOX (edd): *Philosophical Issues in Aristotle's Biology* (Cambridge, 1987).

R. GOULET: 'Sur la chronologie de la vie et des œuvres d'Eunape de Sardes', *Journal of Hellenic Studies* 100, 1980, 60–72 = Goulet, *Études*, pp. 303–322.

R. GOULET: 'Le système chronologique de la Vie de Plotin', in Brisson et al., *Porphyre* I, pp. 189–227 = Goulet, *Études*, pp. 153–190.

R. GOULET: 'Variations romanesques sur la mélancholie de Porphyre', *Hermes* 110, 1982, 443–457 = Goulet, *Études*, pp. 359–372.

R. GOULET (ed): *Dictionnaire des philosophes antiques* I, II, and III (Paris, 1989, 1994, 2000).

R. GOULET: 'Anatolius', in Goulet, *Dictionnaire* I, pp. 179–183.

R. GOULET: 'Athénodore', in Goulet, *Dictionnaire* I, p. 652.

R. GOULET: 'Elias', in Goulet, *Dictionnaire* III, pp. 57–66.

R. GOULET: 'Eunape de Sardes', in Goulet, *Dictionnaire* III, pp. 310–324.

R. GOULET: *Études sur les Vies des philosophes de l'Antiquité tardive: Diogène Laërce, Porphyre de Tyr, Eunape de Sardes*, Textes et traditions 1 (Paris, 2001).

R. GOULET and M. AOUAD: 'Alexandros d'Aphrodisias', in Goulet, *Dictionnaire* I, pp. 125–139.

M.-O. GOULET-CAZÉ: 'L'Arrière-plan scolaire de la Vie de Plotin', in Brisson et al., *Porphyre* I, pp. 231–327.

M.-O. GOULET-CAZÉ: 'Chrysaorius', in Goulet, *Dictionnaire*, II pp. 323–324.

M.-O. GOULET-CAZÉ (ed): *Le commentaire entre tradition et innovation* (Paris, 2000).

J. J. E. GRACIA: 'Boethius and the problem of individuation in the *Commentaries on the Isagoge*', in Obertello, *Atti*, pp. 169–182.

W. GRAHAM: 'Counterpredicability and *per se* accidents', *Archiv für Geschichte der Philosophie* 57, 1975, 182–187.

H. GRANGER: 'Aristotle and the genus-species relation', *Southern Journal of Philosophy* 18, 1980, 37–50.

H. GRANGER: 'Differentia and *per se* accident in Aristotle', *Archiv für Geschichte der Philosophie* 63, 1981, 118–129.

H. GRANGER: 'Aristotle on genus and differentia', *Journal of the History of Philosophy* 22, 1984, 1–23 = Preus and Anton, *Aristotle's Ontology*, pp. 69–93.

A. GUZZO: *L'Isagoge di Porfirio e i commenti di Boezio* (Turin, 1934).

K. GYEKYE: *Arabic Logic—Ibn-al-Tayyib's commentary on Porphyry's Eisagoge*, Studies in Islamic Philosophy and Science (Albany NY, 1979).

W. HAASE (ed): *Aufstieg und Niedergang der römischen Welt* II 36.2, 4 and 7 (Berlin, 1987, 1990, 1994).

D. J. HADGOPOULOS: 'The definition of the "predicables" in Aristotle', *Phronesis* 21, 1976, 59–63.

I. HADOT (ed): *Simplicius: sa vie, son œuvre, sa survie*, Peripatoi 15 (Berlin, 1987).

P. HADOT: 'Un fragment du commentaire perdu de Boèce sur les *Catégories* d'Aristote dans le codex Bernensis 363', *Archives d'histoire doctrinale et littéraire du Moyen Âge* 26, 1959, 11–27 = Hadot, *Plotin*, pp. 383–410.

P. HADOT: 'Fragments d'un commentaire de Porphyre sur le *Parménide* de Platon', *Revue des études grecques* 74, 1961, 410–438 = Hadot, *Plotin*, pp. 281–316.

P. HADOT: 'La métaphysique de Porphyre', in AA. VV., *Porphyre*, pp. 127–163 = Hadot, *Plotin*, pp. 317–353.

P. HADOT: *Porphyre et Victorinus* (Paris, 1968).

P. HADOT: *Marius Victorinus: recherches sur sa vie et ses œuvres* (Paris, 1971).

P. HADOT: 'L'harmonie de Plotin et d'Aristote selon Porphyre dans le commentaire de Dexippe sur les *Catégories*', in AA. VV., *Plotino*, pp. 31–47 = Hadot, *Plotin*, pp. 355–382.³

P. HADOT: 'Porphyre et Victorinus': questions et hypothèses', *Res orientales* 9, 1996, 117–125.

P. HADOT: *Plotin, Porphyre—études néoplatoniciennes* (Paris, 1999).

H. HAPP: *Hyle* (Berlin, 1971).

R. B. HARRIS (ed): *The Significance of Neoplatonism*, Studies in Neoplatonism, ancient and modern 1 (Norfolk VA, 1976).

B. L. HIJMANS: 'Athenodorus on the *Categories* and a pun on Athenodorus', in Mansfeld and de Rijk, *Kephalaion*, pp. 105–114.

P. HOFFMANN: 'Catégories et langage selon Simplicius—la question du "skopos" du traité aristotélicien des *Catégories*', in I. Hadot, *Simplicius*, pp. 61–90.

P. HOFFMANN: 'Théologies et mystiques de la Grèce hellénistique et de la fin de l'Antiquité', *Annuaire de l'école pratique des hautes études: section des sciences religieuses* 101, 1992/3, 241–245.

K. HÜLSER: *Die Fragmente zur Dialektik der Stoiker* (Stuttgart/Bad Cannstatt, 1987/1988).

H. HUGONNARD-ROCHE: 'Les traductions syriaques de l'*Isagoge* de Porphyre et la constitution du corpus syriaque de logique', *Revue d'histoire des textes* 24, 1994, 293–312.

L. JUDSON: 'Chance and "always or for the most part" in Aristotle', in Judson, *Physics*, pp. 73–99.

L. JUDSON (ed): *Aristotle's Physics: a collection of essays* (Oxford, 1991).

³ English translation in Sorabji, *Aristotle Transformed*, pp. 125–140.

P. KALLIGAS: 'Traces of Longinus' library in Eusebius' *Praeparatio Evangelica*', *Classical Quarterly* 51, 2001, 584–598.

F. W. KOHNKE: 'Plato's conception of $\tau\ddot{o}$ $\sigma\ddot{v}\kappa$ $\sigma\ddot{v}\tau\omega\sigma$ $\sigma\ddot{v}\kappa$ $\sigma\ddot{v}$ ', *Phronesis* 2, 1957, 32–40.

W. KULLMANN, J. ALTHOFF, and M. ASPER (edd): *Gattungen wissenschaftlicher Literatur in der Antike*, ScriptOralia 95 (Tübingen, 1998).

G. L. KUSTAS: 'The commentators on Aristotle's *Categories* and on Porphyry's *Isagoge*', in Kustas, *Studies*, pp. 101–126.

G. L. KUSTAS: *Studies in Byzantine Rhetoric*, Analecta Vlatadon 17 (Thessaloniki, 1973).

M.-L. LAKMANN: *Der Platoniker Tauros in der Darstellung des Aulus Gellius*, *Philosophia Antiqua* 63 (Leiden, 1995).

J. LALLOT: 'Sujet/prédicat chez Apollonius Dyscole', *Archives et documents de la société d'histoire et d'épistémologie des sciences du langage* 10, 1994, 35–47.

E. N. LEE, A. P. D. MOURELATOS, and R. M. RORTY (edd): *Exegesis and Argument: studies in Greek philosophy presented to Gregory Vlastos*, *Phronesis* supplement 1 (Assen, 1974).

J. G. LENNOX: 'Kinds, forms of kinds, and the more and the less in Aristotle's biology', in Gotthelf and Lennox, *Philosophical Issues*, pp. 339–359.

G. LEROUX: 'Dexippe', in Goulet, *Dictionnaire II*, pp. 748–749.

E. LEWIS: 'The Stoics on identity and individuation', *Phronesis* 40, 1995, 89–108.

A. C. LLOYD: 'Neoplatonic and Aristotelian logic', *Phronesis* 1, 1956, 146–160.

A. C. LLOYD: 'Genus, species and ordered series in Aristotle', *Phronesis* 7, 1962, 67–90.

A. C. LLOYD: 'The later Neoplatonists', in Armstrong, *Cambridge History*, pp. 269–325.

A. C. LLOYD: 'Neoplatonists' account of predication and mediaeval logic', in AA. VV., *Néoplatonisme*, pp. 357–364.

A. C. LLOYD: *Form and Universal in Aristotle*, ARCA 4 (Liverpool, 1981).

A. C. LLOYD: *The Anatomy of Neoplatonism* (Oxford, 1990).

G. E. R. LLOYD and G. E. L. OWEN (edd): *Aristotle on Mind and the Senses*, Cambridge Classical Studies (Cambridge, 1978).

A. A. LONG and D. N. SEDLEY: *The Hellenistic Philosophers* (Cambridge, 1987).

J. MAGEE: 'Boethius, *de divisione* 875–76, 891–92, and Andronicus Rhodius', in Brown and Stoneman, *A Distinct Voice*, pp. 525–560.

J. MAGEE: *Anicii Manlii Severini Boethii De divisione liber—critical edition, translation, prolegomena and commentary*, *Philosophia Antiqua* 77 (Leiden, 1998).

W.-R. MANN: *The Discovery of Things: Aristotle's Categories and their context* (Princeton NJ, 2000).

J. MANSFELD: 'Doxography and dialectic: the *Sitz im Leben* of the "Placita"', in Haase, *Aufstieg* II 36.4, pp. 3056–3229.

J. MANSFELD: *Heresiography in Context: Hippolytus' Elenchos as a source for Greek philosophy*, *Philosophia Antiqua* 56 (Leiden, 1992).

J. MANSFELD: *Prolegomena: questions to be settled before the study of an author, or a text*, *Philosophia Antiqua* 61 (Leiden, 1994).

J. MANSFELD: *Prolegomena Mathematica from Apollonius of Perga to the Late Neoplatonists*, *Philosophia Antiqua* 80 (Leiden, 1998).

J. MANSFELD and L. M. DE RIK (edd): *Kephalaion—studies in Greek philosophy and its continuation offered to Professor C. J. de Vogel* (Assen, 1975).

J. MARENBERG: 'Mediaeval Latin glosses and commentaries on Aristotelian logical texts, before c.1150 AD', in Burnett, *Glosses and Commentaries*, pp. 77–127.

F. X. MARTIN and J. A. RICHMOND (edd): *From Augustine to Eriugena: essays on Neoplatonism and Christianity in honor of John O'Meara* (Washington DC, 1991).

M. MIGNUCCI: 'Ως ἐπὶ τὸ πολύ et nécessaire dans la conception aristotélicienne de la science', in Berti, *Aristotle on Science*, pp. 173–203.

M. MIGNUCCI: 'The Stoic notion of relatives', in Barnes and Mignucci, *Matter*, pp. 129–221.

M. MIGNUCCI: 'Aristotle's theory of predication', in Angelelli and Cerezo, *History of Logic*, pp. 1–20.

F. MILLAR: 'Porphyry: ethnicity, language, and alien wisdom', in Barnes and Griffin, *Philosophia Togata*, pp. 241–262.

L. MINIO-PALUELLO: 'Formation, transformation, éditions d'ouvrages de Boèce', in Minio-Paluello, *Luoghi cruciali*, pp. 133–148.

L. MINIO-PALUELLO: *Luoghi cruciali in Dante* (Spoleto, 1993).

P. MORAUX: *Der Aristotelismus bei den Griechen*, *Peripatoi* 5 and 6 (Berlin, 1973, 1984).

P. MORAUX: 'Le de *anima* dans la tradition grecque: quelques aspects de l'interprétation du traité, de Théophraste à Thémistius', in Lloyd and Owen, *Aristotle on Mind*, pp. 281–324.

P. MORAUX: 'Porphyre commentateur de la *Physique d'Aristote*', in AA. VV., *Aristotelica*, pp. 227–239.

D. MORRISON: 'The taxonomical interpretation of Aristotle's *Categories*: a criticism', in Preus and Anton, *Aristotle's Ontology*, pp. 19–46.

D. MORRISON: 'Le statut catégoriel des différences dans l' "Organon"', *Revue philosophique de la France et de l'étranger* 183, 1993, 147–178.

A. MOTTE and J. DENOOZ (edd): *Aristotelica Secunda: mélanges offerts à Christian Rutten* (Liège, 1996).

D. NÖRR: *Divisio und Partitio: Bemerkungen zur römischen Rechtsquellenlehre und zur antiken Wissenschaftstheorie*, Münchener Universitätsschriften: Juristische Fakultät: Abhandlungen zur rechtswissenschaftlichen Grundlagenforschung 4 (Berlin, 1972).

E. NORDEN: 'Die Composition und Literaturgattung der horazischen *Epistula ad Pisones*', *Hermes* 40, 1905, 481–528.

L. OBERTELLO: *Severino Boezio* (Genoa, 1974).

L. OBERTELLO (ed): *Atti del congresso internazionale di studi boeziani* (Pavia, 5–8 ottobre 1980) (Rome, 1981).

K. OEHLER: 'Neue Fragmente zum esoterischen Platon bei Porphyrios', *Hermes* 90, 1965, 397–407 = Oehler, *Antike Philosophie*, pp. 222–233.

K. OEHLER: *Antike Philosophie und Byzantinisches Mittelalter: Aufsätze zur Geschichte des griechischen Denkens* (Munich, 1969).

D. J. O'MEARA: *Plotinus: an introduction to the Enneads* (Oxford, 1993).

A. OUZOUNIAN: 'David l'Invincible', in Goulet, *Dictionnaire II*, pp. 614–615.

G. PATZIG, E. SCHEIBE, and W. WIELAND (edd): *Logik, Ethik, Theorie des Geistesmissenschaften* (Hamburg, 1977).

P. PELLEGRIN: *Aristotle's Classification of Animals: biology and the conceptual unity of the Aristotelian corpus* (Berkeley CA, 1986)⁴.

P. PELLEGRIN: 'Logical difference and biological difference: the unity of Aristotle's thought', in Gotthelf and Lennox, *Philosophical Issues*, pp. 313–338.

R. J. PENELLA: *Greek Philosophers and Sophists in the fourth century A.D.: studies in Eunapius of Sardis*, ARCA 28 (Liverpool, 1990).

S. PINES: 'A new fragment of Xenocrates and its implications', *Transactions of the American Philosophical Society* 51, 1961, 1–34 = Pines, *Studies*, pp. 3–95.

S. PINES: *Studies in Arabic Versions of Greek Texts and in Mediaeval Science*, The Collected Works of Shlomo Pines II (Jerusalem, 1986).

M. PLEZIA: *De commentariis isagogicis*, Archiwum filologiczne 23 (Cracow, 1949).

K. PRAECHTER: 'Nikostratos der Platoniker', *Hermes* 57, 1922, 481–517 = Praechter, *Kleine Schriften*, pp. 101–137.

K. PRAECHTER: *Kleine Schriften*, Collectanea 7 (Hildesheim, 1973).

C. PRANTL: *Geschichte der Logik im Abendlande* (Leipzig, 1855).

A. PREUS and J. P. ANTON (edd): *Aristotle's Ontology: Essays in Ancient Greek Philosophy V* (Albany NY, 1992).

O. PRIMAVESI: *Die aristotelische Topik: ein Interpretationsmodell und seine Erprobung am Beispiel von Topik B, Zetemata 94* (Munich, 1996).

A. PRONAY: *C. Marius Victorinus: liber de definitionibus—eine spätantike Theorie der Definition und des Definierens*, Studien zur klassischen Philologie 103 (Frankfurt am Main, 1997).

⁴ First, French edition: *La classification des animaux chez Aristote: statut de la biologie et unité de l'aristotélisme* (Paris, 1982).

H. RABE: *Prolegomenon Sylloge* (Leipzig, 1931).

T. REINHARDT: *Das Buch E der aristotelischen Topik: Untersuchungen zur Echtheitsfrage*, Hypomnemata 131 (Göttingen, 2000).

O. RIETH: *Grundbegriffe der stoischen Ethik: eine traditionsgeschichtliche Untersuchung*, Problemata 9 (Berlin, 1933).

A. S. RIGINOS: *Platonica: the anecdotes concerning the life and writings of Plato*, Columbia Studies in the Classical Tradition 3 (Leiden, 1976).

D. B. ROBINSON: 'The phantom of the *Sophist*: τὸ οὐκ ὅντως οὐκ ὄν (240a–c)', *Classical Quarterly* 51, 2001, 435–457.

M. D. ROHR: 'Aristotle and the transitivity of *being said of*', *Journal of the History of Philosophy* 16, 1978, 379–385.

F. ROMANO: *Porfirio e la fisica aristotelica*, Symbolon 3 (Catania, 1985).

F. ROMANO and D. P. TAORMINA (edd): *Hyparxis e Hypostasis nel Neoplatonismo*, Lessico intellettuale europeo 64 (Florence, 1994).

R. M. RORTY: 'Genus as matter: a reading of *Metaphysics Z–H*', in Lee *et al*, *Exegesis and Argument*, pp. 393–420.

M. ROUECHÉ: 'A middle Byzantine handbook of logic terminology', *Jahrbuch der österreichischen Byzantinistik* 29, 1980, 71–98.

C. RUTTEN: '" $Yπαρξίς$ et $\hat{\nu}\pi\circ\sigma\tauασίς$ chez Plotin', in Romano and Taormina, *Hyparxis*, pp. 25–32.

H. D. SAFFREY: 'Connaissance et inconnissance de Dieu: Porphyre et la *Théosophie* de Tübingen', in Duffy and Peradotto, *Gonimos*, pp. 1–20 = Saffrey, *Recherches*, pp. 11–30.

H. D. SAFFREY: 'Ammonios d'Alexandrie', in Goulet, *Dictionnaire* I, pp. 168–169.

H. D. SAFFREY: 'Pourquoi Porphyre a-t-il édité Plotin?', in Brisson *et al*, *Porphyre* II, pp. 31–64 = Saffrey, *Néoplatonisme*, pp. 3–26.

H. D. SAFFREY: *Recherches sur le Néoplatonisme après Plotin*, Histoire des doctrines de l'Antiquité classique 14 (Paris, 1990).

H. D. SAFFREY: *Le Néoplatonisme après Plotin*, Histoire des doctrines de l'Antiquité classique 24 (Paris, 2000).

V. SAINATI: *Storia dell' "Organon" aristotelico: I, dai 'Topici' al 'de Interpretatione'* (Florence, 1968).

K. T. SCHÄFER: 'Eisagoge', *Reallexicon für Antike und Christentum* 4 (Stuttgart, 1959), 862–904.

E. G. SCHMIDT: 'Alexander von Aphrodisias in einem altarmenischen Kategorien-Kommentar', *Philologus* 110, 1966, 277–286.

L. P. SCHRENK: 'A note on $\ddot{\alpha}\theta\rho\circ\sigma\mu\alpha$ in "Didaskalikos" 4.7', *Hermes* 119, 1991, 497–500.

P. SCHUBERT: *A Yale Papyrus (PYale III 137) in the Beinecke Rare Book and Manuscript Library III*, American Studies in Papyrology 41 (Oakville CT, 2001).

D. N. SEDLEY: 'The Stoic criterion of identity', *Phronesis* 27, 1982, 255–275.

R. SGARBI: 'Osservazioni sul testo e sulla lingua della versione armena dell' "Isagoge" di Porfirio', *Memorie dell'Istituto Lombardo: Accademia di scienze e lettere*, classe di lettere 31, 1972, 365–477.

R. W. SHARPLES: 'Alexander of Aphrodisias: scholasticism and innovation', in Haase, *Aufstieg* II 36.2, pp. 1176–1243.

J. SHIEL: 'Boethius' commentaries on Aristotle', *Mediaeval and Renaissance Studies* 4, 1958, 217–244 = Fuhrmann and Gruber, *Boethius*, pp. 155–183 = Sorabji, *Aristotle Transformed*, pp. 349–372.

J. SHIEL: 'Boethius and Eudemus', *Vivarium* 12, 1974, 14–17.

J. SHIEL: 'The Greek copy of Porphyrios' *Isagoge* used by Boethius', in Wiesner, *Aristoteles*, pp. 313–340.

C. SHIELDS: *Order in Multiplicity—homonymy in the philosophy of Aristotle*, Oxford Aristotle Studies (Oxford, 1999).

J. H. SLEEMAN and G. POLLET: *Lexicon Plotinianum*, Ancient and Mediaeval Philosophy de Wulf-Mansion Centre, series 1, 2 (Leiden, 1980).

P. SLOMKOWSKI: *Aristotle's Topics*, *Philosophia Antiqua* 74 (Leiden, 1997).

A. SMITH: *Porphyry's Place in the Neoplatonic Tradition—a study in post-Plotinian Neoplatonism* (The Hague, 1974).

A. SMITH: 'Did Porphyry reject the transmigration of human souls into animals?', *Rheinisches Museum* 127, 1984, 276–284.

A. SMITH: 'Porphyrian studies since 1913', in Haase, *Aufstieg* II 36.2, pp. 717–773.

A. SMITH: 'A Porphyrian treatise against Aristotle?', in Martin and Richmond, *Augustine*, pp. 183–186.

A. SMITH: 'Ὑπόστασις and ὑπαρξίς in Porphyry', in Romano and Taormina, *Hyparxis*, pp. 33–41.

J.-L. SOLÈRE: 'D'un commentaire l'autre: l'interaction entre philosophie et théologie au moyen âge dans le problème de l'intensification des formes', in Goulet-Cazé, *Commentaire*, pp. 411–424.

F. SOLMSEN: 'Boethius and the history of the *Organon*', *American Journal of Philology* 65, 1944, 69–74 = Fuhrmann and Gruber, *Boethius*, pp. 127–132.

R. SORABJI: 'John Philoponus', in Sorabji, *Philoponus*, pp. 1–40.

R. SORABJI: *Matter, Space and Motion—theories in antiquity and their sequel* (London, 1988).

R. SORABJI (ed): *Philoponus and the Rejection of Aristotelian Science* (London, 1987).

R. SORABJI (ed): *Aristotle Transformed—the ancient commentators and their influence* (London, 1990).

R. SORABJI (ed): *Aristotle and After, Bulletin of the Institute of Classical Studies* supplement 68 (London, 1997).

S. M. STERN, A. HOURANI, and V. BROWN (edd): *Islamic Philosophy and the Classical Tradition: essays presented by his friends and pupils to Richard Walzer on his seventieth birthday* (Oxford, 1972).

M. E. STONE and M. E. SHIRINIAN: *Pseudo-Zeno: Anonymous Philosophical Treatise*, *Philosophia Antiqua* 83 (Leiden, 2000).

S. K. STRANGE: 'Plotinus, Porphyry, and the Neoplatonic interpretation of the *Categories*', in Haase, *Aufstieg* II 36.2, pp. 955–974.

S. K. STRANGE: *Porphyry: On Aristotle's Categories*, Ancient Commentators on Aristotle (London, 1992).

E. STUMP: *Boethius's De topicis differentiis* (Ithaca NY, 1978).

R. TIERNEY: 'On the senses of 'SYMBESEKOS' in Aristotle', *Oxford Studies in Ancient Philosophy* 21, 2001, 61–82.

R. B. TODD: 'EPITEDEIOTES in philosophical literature: towards an analysis', *Acta Classica* 15, 1972, 25–35.

M. M. TWEEDALE: 'Alexander of Aphrodisias' views on universals', *Phronesis* 29, 1984, 279–303.

R. WALZER: 'Platonism in Islamic Philosophy', in AA. VV., *Tradition platonicienne*, pp. 203–244 = Walzer, *Greek into Arabic*, pp. 236–252.

R. WALZER: 'Porphyry and the Arabic Tradition', in AA. VV., *Porphyre*, pp. 274–299.

R. WALZER: *Greek into Arabic: essays on Islamic philosophy*, Oriental Studies 1 (Oxford, 1962).

R. WALZER: 'Furfuriyüs', *Encyclopédie d'Islam* (Leiden, 1977²), pp. 970–971.

V. E. WEDIN: 'A remark on *per se* accidents and properties', *Archiv für Geschichte der Philosophie* 55, 1973, 30–35.

L. G. WESTERINK: 'The Alexandrian commentators and the introductions to their commentaries', in Sorabji, *Aristotle Transformed*, pp. 325–348.

R. WHATELEY: *Elements of Logic* (London, 1844⁸).

M. J. WHITE: 'Genus as matter in Aristotle?', *International Studies in Philosophy* 7, 1975, 41–56.

J. WHITTAKER: 'Philological comments on the neoplatonic notion of infinity', in Harris, *Neoplatonism*, pp. 155–172.

J. WHITTAKER: 'Alcinoos', in Goulet, *Dictionnaire I*, pp. 112–113.

J. WIESNER (ed), *Aristoteles Werke und Wirkung* II (Berlin, 1987).

R. E. WITT: 'ΥΠΟΣΤΑΣΙΣ', in Wood, *Amicitiae Corolla*, pp. 319–343.

H. G. WOOD (ed): *Amicitiae Corolla* (London, 1933).

A. WOUTERS: *The Grammatical Papyri from Graeco-Roman Egypt: contributions to the study of the 'ars grammatica' in antiquity*, Verhandelingen van de koninklijke Academie voor Wetenschappen, Letteren en schone Kunsten van Belgie 49 (Brussels, 1979).

GLOSSARIES

Greek–English

ἀθροισις	assembly
ἀθροισμα	assemblage
αἰσθητικός	percipient
αἰσθητός	perceptible
ἄκρον	extreme
ἄλλοιος	otherlike
ἄλλος	(an)other
ἄλογος	non-rational
ἀναγκαῖος	necessary
ἀνάγκη	necessity
ἀναιρεῖν	remove
ἀναίσθητος	non-percipient
ἀνάλογος	analogous
ἀνάνετος	undiminishable
ἀνεπίτατος	unaugmentable
ἀνεσις	diminution
ἀνιέναι [ἀνειμι]	ascend
ἀνιέναι [ἀνίημι]	diminish
ἀντικατηγορεῖν	counterpredicate
ἀντικείμενος	opposite
ἀντιστρέφειν	convert
ἄπειρος	infinite
ἄπλους	simple
ἀποδεικνύναι	explain
ἀπόδεξις	proof
ἀποδιδόναι	present
ἀπόδοσις	presentation
ἀποτελεῖν	produce
ἀποτομή	contradistinction
ἀρχή	origin
ἀσώματος	incorporeal
ἄτομος	individual
ἀφορίζειν	demarcate
ἀχώριστος	inseparable
ἄψυχος	inanimate

γελαστικός	laughing
γένεσις	birth
γενικός	general
γένος	genus
γνωσκειν	know
δεικνύαι	show
δεκτικός	receptive
διαιρεῖν	divide
διαιρεσις	division
διαιρετικός	divisive
διάκρισις	(differentiate)
διαλλάττειν	distinguish
διαστέλλειν	discriminate
διαφέρειν	differ
διαφορά	difference
διάφορος	different
διϊστάναι	set apart from
δυνάμει	potentially
εἰδέναι	realize
εἰδικός	special
εἰδοποιεῖν	specify
εἰδοποιός	specific
εἶδος	species [form: 11.12, 13, 14]
ἔμψυχος	animate
ἐναντίος	contrary
ἐνεργείᾳ	actually
ἐνοποίος	unificatory
ἐπαναβεβηκός	superordinate
ἐπεισοδιώδης	adventitious
ἐπεσθαι	follow
ἐπιγίνεσθαι	supervene
ἐπιδέχεσθαι	admit
ἐπινοεῖσθαι	think of
ἐπινοία	thought
ἐπίσης	equally
ἐπιστήμη	knowledge
ἐπίτασις	augmentation
ἐπιτείνειν	augment
ἐπιτηδειότης	readiness
ἐτεροίος	diversified
ἐτερος	diverse
ἐτερότης	diversity

<i>θεωρεῖν</i>	observe
<i>θεωρία</i>	study
<i>ἴδιον</i>	property
<i>ἴδιος</i>	proper
<i>ἴδιότης</i>	proper feature
<i>ἴδιως</i>	properly
<i>καθ' ἔκαστον</i>	singular
<i>καθόλου</i>	in general
<i>κατηγορεῖν</i>	predicate
<i>κατηγορία</i>	(type of) predication
<i>κατιέναι</i>	descend
<i>κοινός</i>	common
<i>κοινότης</i>	common feature
<i>κυρίως</i>	in the strict sense
<i>λογικός</i>	rational
<i>λογικώτερον</i>	from a logical point of view
<i>λόγος</i>	account [reason: 14.8-12]
<i>μέθεξις</i>	participation
<i>μέρος</i>	part
<i>κατὰ μέρος</i>	particular
<i>μέσος</i>	intermediate
<i>μεταβολή</i>	change
<i>μετέχειν</i>	participate
<i>μετονοία</i>	sharing
<i>μετοχή</i>	participating
<i>μορφή</i>	shape
<i>νοῦς</i>	thought [15.5]
<i>οἰκεῖος</i>	appropriate, own
<i>οἰκειότης</i>	affinity
<i>ὅλος</i>	whole
<i>ὅλως</i>	generally
<i>όμογενής</i>	cogeneric
<i>όμοιός</i>	similar
<i>όμοιότης</i>	similarity
<i>όμωνύμως</i>	homonymously
<i>ὄνομα</i>	name
<i>ὄνομάζειν</i>	name

ὅρίζειν	define
ὅρισμός	definition
ὅρος	definition
οὐσία	substance
παλαιός	old master
παραλαμβάνειν	include
παρεῖναι	be present in
περιέχειν	contain
περιοχή	containing
περισσεύειν	exceed
περιττός	excessive
πεφυκέναι	be of such a nature
πλεονάζειν	be more extensive
πλέον ἔχειν	surpass
πλῆθος	plurality
πράγμα	object
πρεσβύτερος	older master
προέπινοεῖν	think of before
προηγουμένως	principally
προσεῖναι	be present to
προσεχῆς	proximate
πρότερος	prior [first: 2.7]
προϋποκεῖσθαι	be there beforehand
προϋφίστασθαι	pre-subsist
σημανόμενον	meaning
συλλαμβάνειν	collect
συλληπτικός	collective
συμβαίνειν	be an accident [be the case: 17.14]
συμβάλλεσθαι	contribute
συμβεβηκός	accident
συμπληροῦν	complete
συμπληρωτικός	completive
σύμφυτος	connatural
συναγωγός	(gather)
συναιρεῖν	bring together
συναναιρεῖν	co-remove
συνιστάναι	constitute
συντιθέναι	compound
συντρέχειν	coincide
συνωνύμως	synonymously
σύστασις	constitution

<i>συστατικός</i>	constitutive
<i>σχέσις</i>	relation
<i>σχῆμα</i>	figure
<i>τέμνειν</i>	split
<i>τομή</i>	splitting
<i>ὕλη</i>	matter
<i>ὑπάλληλος</i>	subaltern
<i>ὑπάρχειν</i>	hold (of)
<i>ὑποβεβηκός</i>	subordinate
<i>ὑπογράφειν</i>	delineate
<i>ὑπογραφή</i>	delineation
<i>ὑποκείμενον</i>	subject
<i>ὑπόστασις</i>	subsistence
<i>ὑστερογενής</i>	later-born
<i>ὑστερός</i>	posterior
<i>ὑφίστασθαι</i>	subsist
<i>φθορά</i>	destruction
<i>φύσις</i>	nature
<i>χρεμετιστικός</i>	neighing
<i>χωρίζειν</i>	separate
<i>χωριστός</i>	separable

English–Greek

accident	<i>συμβεβηκός</i>
be an accident	<i>συμβαίνειν</i>
account (n.)	<i>λόγος</i>
actually	<i>ἐνεργείᾳ</i>
admit	<i>ἐπιδέχεσθαι</i>
adventitious	<i>ἐπεισοδιώδης</i>
affinity	<i>οἰκειότης</i>
analogous	<i>ἀνάλογος</i>
animate (adj.)	<i>ἔμψυχος</i>
another	<i>ἄλλος</i>
appropriate (adj.)	<i>οίκειος</i>
ascend	<i>ἀνιέναι</i>
assemblage	<i>ἄθροισμα</i>
assembly	<i>ἄθροιστις</i>

augment	ἐπιτείνειν
augmentation	ἐπίτασις
be there beforehand	προϋποκεῖσθαι
birth	γένεσις
bring together	συναυρεῖν
change (n.)	μεταβολή
cogeneric	δμογενής
coincide	συντρέχειν
collect	συλλαμβάνειν
collective	συλληπτικός
common (adj.)	κοινός
common feature	κοινότης
complete	συμπληροῦν
completive	συμπληρωτικός
compound (vb.)	συντιθέναι
connatural	σύμφυτος
constitute	συνιστάναι
constitution	σύστασις
constitutive	συστατικός
contain	περιέχειν
containing	περιοχή
contradistinction	ἀποτομή
contrary	ἐναντίος
contribute	συμβάλλεσθαι
convert	ἀντιστρέφειν
co-remove	συναναιρεῖν
counterpredicate	ἀντικατηγορεῖν
define	όριζειν
definition	όρισμός, ὅρος
delineate	νπογράφειν
delineation	νπογραφή
demarcate	ἀφορίζειν
descend	κατιέναι
destruction	φθορά
differ	διαφέρειν
difference	διαφορά
different	διάφορος
differentiate	(διάκρισις)
diminish	ἀνιέναι
diminution	ἀνεσις

discriminate	<i>διαστέλλειν</i>
distinguish	<i>διαλλάττειν</i>
diverse	<i>έτερος</i>
diversified	<i>έτεροιος</i>
diversity	<i>έτεροτης</i>
divide	<i>διαιρεῖν</i>
division	<i>διαιρεσις</i>
divisive	<i>διαιρετικός</i>
equally	<i>ἐπίσης</i>
exceed	<i>περισσεύειν</i>
excessive	<i>περιπτός</i>
explain	<i>ἀποδεικνύναι</i>
be more extensive	<i>πλεονάζειν</i>
extreme	<i>ἄκρον</i>
figure	<i>σχῆμα</i>
follow	<i>ἐπεσθαι</i>
form	<i>εἶδος</i>
gather	<i>(συναγωγός)</i>
general	<i>γενικός</i>
in general	<i>καθόλου</i>
generally	<i>ὅλως</i>
genus	<i>γένος</i>
hold (of)	<i>ήπαρχειν</i>
homonymously	<i>διμωνύμως</i>
inanimate	<i>ἄψυχος</i>
include	<i>παραλαμβάνειν</i>
incorporeal	<i>ἀσώματος</i>
individual	<i>ἄτομος</i>
infinite	<i>ἄπειρος</i>
inseparable	<i>ἀχώριστος</i>
intermediate	<i>μέσος</i>
know	<i>γιγνώσκειν</i>
knowledge	<i>ἐπιστήμη</i>
later-born	<i>νόστερογενής</i>
laughing	<i>γελαστικός</i>
from a logical point of view	<i>λογικώτερον</i>

object (n.)	<i>πρᾶγμα</i>
old master	<i>παλαιός</i>
older master	<i>πρεσβύτερος</i>
matter	<i>ῥῆλη</i>
meaning	<i>σημανόμενον</i>
name (n.)	<i>ὄνομα</i>
name (vb.)	<i>δονομάζειν</i>
nature	<i>φύσις</i>
be of such a nature	<i>πεφυκέναι</i>
necessary	<i>ἀναγκαῖος</i>
necessity	<i>ἀνάγκη</i>
neighing	<i>χρεμετιστικός</i>
non-percipient	<i>ἀναισθητος</i>
non-rational	<i>ἄλογος</i>
observe	<i>θεωρεῖν</i>
opposite	<i>ἀντικείμενος</i>
origin	<i>ἀρχή</i>
other	<i>ἄλλος</i>
otherlike	<i>ἄλλοιος</i>
own (adj.)	<i>οἰκεῖος</i>
part (n.)	<i>μέρος</i>
participate	<i>μετέχειν</i>
participating	<i>μετοχή</i>
participation	<i>μέθεξις</i>
particular (n.)	<i>κατὰ μέρος</i>
perceptible	<i>αἰσθητός</i>
percipient	<i>αἰσθητικός</i>
plurality	<i>πλῆθος</i>
posterior	<i>ὕστερος</i>
potentially	<i>δυνάμει</i>
pre-subsist	<i>προϋφίστασθαι</i>
predicate (vb.)	<i>κατηγορεῖν</i>
predication	<i>κατηγορία</i>
present (vb.)	<i>ἀποδιδόναι</i>
be present in	<i>παρεῖναι</i>
be present to	<i>προσεῖναι</i>
presentation	<i>ἀπόδοσις</i>
principally	<i>προηγουμένως</i>
prior (adj.)	<i>πρότερος</i>
produce (vb.)	<i>ἀποτελεῖν</i>

proof	ἀπόδειξις
proper	ἴδιος
proper feature	ἴδιότης
properly	ἴδιως
property	ἴδιον
proximate	προσεχής
rational	λογικός
readiness	ἐπιτηδειότης
realize	εἰδέναι
reason (n.)	λόγος
receptive	δεκτικός
relation	σχέσις
remove	ἀναιρεῖν
separable	χωριστός
separate	χωρίζειν
set apart from	διίσταναι
shape (n.)	μορφή
sharing	μετονσία
show (vb.)	δεικνύναι
similar	όμοιος
similarity	όμοιότης
simple	άπλον
singular (n.)	καθ' ἔκαστον
special	εἰδικός
species	εἶδος
specific	εἰδοποιός
specify	εἰδοποιεῖν
split	τέμνειν
splitting (n.)	τομή
in the strict sense	κυρίως
study	θεωρία
subaltern	ὑπάλληλος
subject (n.)	ὑποκείμενον
subordinate (adj.)	ὑποβεβηκός
subsist	ὑφίστασθαι
subsistence	ὑπόστασις
substance	οὐσία
superordinate (adj.)	ἐπαναβεβηκός
supervene	ἐπιγίνεσθαι
surpass	πλέον ἔχειν
synonymously	συνωνύμως

think of	<i>ἐπινοεῖσθαι</i>
think of before	<i>προϊπνοεῖν</i>
thought	<i>ἐπινοία, νοῦς</i>
unaugmentable	<i>ἀνεπίτατος</i>
undiminishable	<i>ἀνάνετος</i>
unificatory	<i>ἐνοποιός</i>
whole	<i>ὅλος</i>

INDEX OF CITATIONS

Alcinous			
<i>didask</i> iv [155.42–156.3]	344	126.31–35	117
v [157.4–10]	131	153.13	27 n. 19
vi [159.43–44]	336	164.16–18	134 n. 113
x [165.5–7]	31	172.19–21	xiii n. 22
xix [174.11]	106	176.24–26	58, 160
xxv [178.5–6]	134	180.3–6	47
xxx [183.22–25]	173	193.19	107
		203.7–8	88 n. 106
		203.15	133
		204.25–30	107
Alexander			
<i>an</i> 85.15–18	139	205.22–24	340
90.6–8	43	205.28–206.1	331
<i>in APr</i> 6.34–7.5	273	206.17–19	350
10.30–11.3	333–334	206.22–23	352
25.2–5	340	207.22–24	108
29.7	142	208.31–209.22	334 n. 22
29.21–29	210	211.28–29	38 n. 69
33.1–14	45	245.30	139
35.2–4	210	254.17–20	348
99.31–100.22	46	263.15–16	225
181.21	70 n. 62	276.16–18	70 n. 62
264.5–6	320	285.13–15	225
272.7	363	295.32–34	151
292.36–293.1	120	347.24–27	297
295.16–17	262	369.2–5	81
295.34–35	88 n. 106	378.28–30	348
298.7–11	217	387.5–12	364
302.15–16	262	399.2–5	352
338.14	309	399.6–12	282
359.18–366.12	74	413.23–24	93
367.3–14	323	416.32–33	214
<i>diff spec</i>		427.4–5	285
5–6	331	428.26–28	55
7	196	<i>in Met Lambda</i>	
9–12	352	frag 36	134
<i>mant</i>		<i>quaest</i>	
169.11–21	182, 246, 349–350	i 11a [22.17–20]	273
<i>in Met</i>		ii 28 [78.15–16, 34–35]	195, 329
8.11	70 n. 62	[78.18–20]	47 n. 89
52.13–16	46	<i>in Top</i>	
77.31–34	139	1.15–18	135
79.10	134	23.21	26 n. 15
110.12–13	339 n. 33	30.12–13	35 n. 57
112.19–113.1	27	38.27–39.2	88
121.22–25	297	38.29–31	191
126.7–8	70 n. 62	39.2–10	307

Alexander (<i>cont.</i>):		<i>in Xenoc</i>	
<i>in Top</i> (<i>cont.</i>):		p.6	260
39.12-20	213 n. 34	p.8	47 n. 89
42.4-6	87 n. 102	p.9	241
44.28-29	291 n. 2		
45.10-14	88	Alexander (?)	
47.10-11	99	<i>quaest</i>	
47.29-48.1	123	iv 8 [128.4-5]	333
48.16-21	229	[128.12-15]	333
48.16-51.17	233	Ammonius	
50.1-6	234	<i>ad fin voc diff</i>	
50.11-15	233, 234	28	164 n. 22
50.21-51.4	352 n. 63	30-31	164 n. 22
55.24-27	30 n. 33		
58.8-11	81 n. 89	Ammonius	
60.29-61.1	47 n. 89	<i>in Cat</i>	
63.20-65.3	303	29.10-12	149
65.29-30	94	31.9-12	359
86.26-28	134	41.7-9	259 n. 9
97.24-27	51	45.8-13	354
107.8-10	95 n. 6	65.13-16	290
115.19-26	197	66.14-19	xvii n. 35
154.11-13	85	80.32-81.16	243
161.2-8	84	<i>in Int</i>	
220.25-27	157	7.30-8.4	71
292.26-27	127 n. 91	14.2-11	323 n. 9
295.9-10	263	20.6-8	42
295.16-18	307	21.21-23	71 n. 64
296.15-17	201	44.19-20	71 n. 64
297.28-298.1	358	44.23-25	220
301.9-10	138 n. 122	51.15-17	319
302.6-7	340	51.19-20	320
304.21	143	71.5-11	195
305.23	143 n. 133	87.13-18	245
306.8-11	228	89.18-36	240
314.15-23	351	97.3-4	340
317.7	142	98.7-12	80
317.10-14	192	111.19-22	106
320.21-23	260	153.14-19	280
345.25-346.1	167	162.9-16	143
354.2-4	329	163.2-5	143
355.12-14	43, 47	165.14-16	74
355.16-17	329	169.9-10	327
355.18-24	101	<i>in Isag</i>	
358.11-12	119 n. 80	1.1-5	xv
360.7-8	218	20.15-21	36
369.15-17	298 n. 8	22.12-22	xi, xv, xix, 23
382.20-21	211 n. 31	23.3-7	xv n. 29
383.11-12	297	39.3-7	43
388.6-14	298 n. 8	45.1-2	36
399.20-400.4	208 n. 20	45.5-15	36
452.6-11	331	46.17-21	34 n. 50
463.9-10	47 n. 89	48.18-49.6	50

54.6–55.7
54.23–55.2
55.8–56.11
57.14–25
72.13
76.25–77.5
81.16–83.22
85.2
85.8–10
85.19–86.28
91.4–17
92.10–13
93.25–94.2
94.13–19
95.4–5
95.13–96.9
100.23–101.4
102.3–105.12
115.20–24
117.20–23
124.18–125.7
126.2–6

anecd Graec II
140

anon
in Parm

IV 3
VIII 1–35
VIII 12–21
IX 16–23
XI 9
XI 20
XII 29–35

anon
in Thet
IX 13–19

anon Syriac
in Isag

228.20–23
232.5–6
237.44–238.2
249.38–42
251.25–252.16

Apollonius Dyscolus
synt I
37 [34.3–35.4]

Apuleius
int
i [189.2]

58 n. 28
59
61
59 n. 30
xxi n. 48
61
335
127
130 n. 108, 134 n. 112
127
148
172 n. 45
158
227–228
165 n. 27
168 n. 35
186
189 n. 94
277
243
281
174

Arethas
in Isag

22.5–9
36.1–3
49.14
64.1–13
64.17–19
64.22–24
67.35–68.8
71.4–12
71.16–17
73.1–16
73.25–27
79.9–13
101.13–20
104.21–22
110.11–21
126.8
127.11–28

Aristotle
An
414b20–33
402a22–25
APr
26a21–23
43a25–36

45 n. 85
157
33 n. 47
90
60 n. 33
60 n. 33
39 n. 71

43a39–40
43b1–5
43b29–31
46b26–28

47433–35
49a6–10
68a19–20
70b18–20

73a34–b4
75a20–21
83b9–10
83b15
91a15–25
91b28–32
91b39
92b12–13

71
144 n. 134
31, 303
167 n. 30

62
52 n. 38
116
153
343
101 n. 26
228
236
167
226
346 n. 52
37
351 n. 60
179
218
266
296 n. 2

144
95, 333
125
144
79, 104,
150 n. 146, 335
79 n. 83
216
241
30 n. 32
144
322
84
215
171 n. 41
224
267
28
88, 211–212
130, 131, 133
177 n. 65
119

Aristotle (<i>cont.</i>):			
<i>APst</i> (<i>cont.</i>):			
96a24-27	143	996b15-16	229
96b15-97b6	130	998b22-29	119, 244 n. 10, 330
97a11-14	156	999a24-b3	46
100a6-8	139	1003a33-34	122
<i>Cat</i>		1003b26-29	199 n. 78
1a1-11	120	1003b32-33	175 n. 59
1a16-19	322	1005a15-18	36
1a20-b9	231	1007b2-3	296
1b6-7	325	1009a34-36	189 n. 94
1b10-15	145, 243, 327, 358	1010b35-1011a2	258
1b16	29, 108	1016b31-35	81
1b25	69	1018a9-11	347
2a14-16	99	1018a12-15	156
2a19-34	358 n. 71, 360	1019a1-4	248
2b3-5	272 n. 9	1019a7-11	299
2b7-8	260 n. 11	1020a33-b1	351
2b20-21	142	1023b17-19	339
2b22-23	99	1023b22-25	339
2b31-36	85	1024a11-28	285 n. 1
3a3-4	240 n. 9	1024a29-b6	62
3a37-b2	238 n. 14	1024a30-36	55, 160
3b10-21	281	1024a36-b6	63
3b20	351 n. 61	1024b3-6	195, 350
7b10-21	362	1024b6-9	52, 195
7b27-31	362	1025a14-16	224
7b35-8a6	362	1025a30-32	221
8b25-26	27, 125	1028a10-13	91 n. 116
9a14	27	1028a29-31	54
10a11-16	95	1030a21-22	122
11a20-38	125 n. 98	1033a2-4	88
14a23-25	125 n. 98	1033b33-1034a2	284
14a26-32	362	1035b18-25	260
14a27-29	33 n. 47	1036a2-5	45 n. 87
14b10-13	258	1037b18-21	189
14b33-35	333	1038a5-8	195
15a4-7	259	1039a3-23	354
15a29-32	346	1040a8-15	153
<i>EN</i>		1040a33-b2	101
1006b17-19	334	1045a14-b7	119 n. 78,
1129a23-26	347 n. 53		195, 195 n. 108
1173a23-28	172-173	1053b21-24	119
<i>HA</i>		1054b1-2	347
487b23-24	285 n. 1	1054b13-27	347-348
<i>Int</i>		1054b22-1055a2	156
16a14-15	320	1055a26-27	197
16b7-8	220-221	1075b37-1076a2	298
17a38-b1	79, 80	1086b33-37	79 n. 82
19b37-38	71	1090b19-20	298
24a6-9	48	1091a29-33	298
<i>Met</i>		<i>Meteor</i>	
987b31	xiii n. 19	378a9-24	26

<i>PA</i>				
643a22-25	195	119a27-28	289	
643a27-31	171	120b14-15	201	
643b10-13	184	120b30-35	233	
644a6-10	184	120b36-37	91	
644a16-21	174	121a11-13	138	
673a8	208	121a27-39	138 n. 122	
692b3-6	174	121a28-30	145 n. 137	
		121b3-4	256	
<i>Phys</i>		122b16-17	194, 350 n. 56	
184a16-19	276 n. 14	122b37-123a1	291 n. 2	
184a25-26	341 n. 39	123a30	141	
186b26-29	160	126a26-29	111	
187b7-8	134	127a26-34	119 n. 80	
189a12-13	134	128a20-23	194, 246	
195b10-12	322 n. 8	128a23-26	87	
210a15-17	149	128a28-29	86	
226b7-8	280 n. 8	128b15-21	217	
229a2-3	280 n. 8	128b34-129a16	217	
<i>Poet</i>		129a3-5	219 n. 44	
1451b34-35	298	129a6-10	217	
<i>Pol</i>		129a28-29	219 n. 44	
1275a34-38	323	131a27-32	301	
<i>Rhet</i>		132b19-28	204	
1356b31-32	134	132b35-133a11	138 n. 122	
1369b17	205	133a1	199	
1396b12-17	204 n. 9	133a15-23	70 n. 62	
		133b31-36	346	
<i>SEL</i>		134a14-16	171 n. 44	
165a10-12	127	134b5-7	285	
172a13-15	118	134b34-36	70 n. 52	
174a8-9	321	137b14-27	264	
178a5	28	138b16-18	212	
178b37-39	91	139a28-29	167 n. 31	
<i>Top</i>		139a29-31	87	
101b17-25	30, 88, 191, 213, 303	140a24-32	56, 119 n. 80, 197	
101b37-102b20	30	141b25-29	251 n. 30, 362	
101b38	304	142a26-31	95	
102a18-19	203, 304	143b6-9	161, 167 n. 31	
102a22-35	55, 63, 215, 301, 304	143b29-30	139 n. 125	
102b4-10	150, 225, 233, 304	144a21-22	86	
103a1-5	30	144a31-b12	330	
103a25-31	81 n. 89	144b9-11	252, 282	
103b3-17	267, 302, 303	144b12-30	349	
103b20-21	73	144b31-145a2	350 n. 56	
103b29-31	84	145a15	352	
103b35-37	83	148b23	322 n. 8	
107b33-36	239	150a33-36	260	
108b22-23	87	154a10-11	293	
109b5-7	120	155a7-10	214	
110b28	52			
111a25-34	84, 145 n. 137	[Aristotle]		
112b21-26	83	Met		
113a24-32	45 n. 85			
115b9	175 n. 57	1060a5	38 n. 69	

[Aristotle] (<i>cont.</i>):				
Met (<i>cont.</i>):				
1061b27–30	221	195B	351 n. 61	223
1064b17–19	221	202A		190
Mund		202D–203A		183
395a29–31	41 n. 77	234D		134 n. 65
		252B		37 n. 61
		272CD		278 n. 19
Aristoxenus		284A		33 n. 47
apud Porphyry, <i>in Ptol harm</i>		288D–289B		249
79.9–10	133	<i>in Int²</i>		
		67.18–21		70 n. 61
Arius Didymus		71.13–18		35
frag 3	93	77.5–15		70 n. 61
		80.1–6		338
Asclepius		85.25–28		325
in Met		86.19–25		325
142.34–143.3	241	107.8–20		325
434.19–29	355	115.20–21		70 n. 62
		137.22–23		140 n. 126
Atticus		201.2–6		35
frag 2	366	361.8–22		30 n. 34
		361.9		xx n. 47
Augustine		384.24–27		225
c Acad III xix 42	338	<i>in Isag¹</i>		xiv
CD X 30	280 n. 6	4.12–14		xii n. 14
		10.17		ix
Boethius		12.20–21		
div		26.15–27.18		190–191
875D–876D	34, 129	43.25–44.5		61
876D	xiv n. 25	44.17–18		70 n. 61
877C	126, 132	55.23–56.2		89
877D	341 n. 42	67.10–11		99
878BC	182, 341	78.9–11		109 n. 53
879B	260 n. 13	82.19–83.2		148 n. 140
879B–880A	341	89.3–4		176
879BC	196, 251	104.9–105.9		244
880B	181–182, 196 n. 111	110.7–111.24		255
880D–881A	168 n. 35	112.17–20		261
882D	33	116.5		269 n. 1
883A	33	125.9–13		290
883C	132	126.9–16		292 n. 6
883D	132	127.1–9		293 n. 8
883D–884A	132	<i>in Isag²</i>		
885BC	135, 183	143.11–12		xiv
887BC	341	168.9–169.5		35
887D	149	171.14–21		50
888D–889C	51	180.20–23		61
in Cat		183.13		395
178A	124 n. 94	185.10		80 n. 86
179B	185	186.12		305
182C	239–240	194.5–19		351
187D	xii n. 17	203.19		99 n. 20
190B	216	215.2–6		101

218.1-219.22	101	21.1	161 n. 19
226.22-227.3	128	Cleomedes	xviii n. 39
237.1-11	148 n. 40	ii 7	
244.19-20	165 n. 26		
263.22-25	188 n. 92	David	
265.21-266.7	89-90	<i>in Isag</i>	
276.3-9	309	82.8-13	xii n. 14
279.17-18	208 n. 20	85.25-86.11	90 n. 112
287.12-19	330	92.5	xix
289.5-8	238, 238 n. 13	92.17-18	24
290.13-18	238	104.26-27	25 n. 9
293.18-294.21	244	108.2-4	xxiii
301.17-302.1	254	123.21-26	53
304.16-306.17	255	132.25-28	62
313.14	260 n. 2	133.20	68 n. 54
315.1-6	299	138.28-31	79
316.2-4	270 n. 7	142.9	90
324.11-19	278 n. 19	144.32-145.4	95
325.4-7	278 n. 19	145.9-13	100
325.6-7	xx n. 47	149.11-14	111 n. 56
331.7-8	285 n. 1	152.17-19	105 n. 35
335.13-17	289 n. 5	158.24-159.7	122 n. 88
335.18-336.8	289	162.28	128 n. 104
337.10-18	291	167.26	152 n. 150
339.11-14	292, 292 n. 6	168.16-169.17	343
345.14	309	177.20	165 n. 26
348.1-3	xii n. 14, xiv n. 25	178.6-7	167
<i>top diff</i>		183.22-184.6	161
1177D-1178B	303	187.30-188.5	187
		188.19-20	188 n. 92
		189.14-17	189-190
Cicero		192.14-25	187 n. 86
<i>de orat</i>		195.13-16	192
I xlii 189	63	196.18-19	198 n. 116
<i>inv</i>		199.10	199 n. 120
I xxii 32	98, 228, 342 n. 43	202.21-22	214
<i>off</i>		204.14-16	208 n. 21
I iii 10	131	211.24	xvii
<i>part orat</i>		212.14-17	247
xii 41	206 n. 15	212.26-30	253
<i>Top</i>		214.20-21	237
vii 30	94 n. 3	215.31-216.23	262
31	64 n. 44, 98 n. 17, 342	216.25-29	264-265
viii 33	136	216.30-32	265 n. 12
xxii 83	206	217.25	267 n. 19
[Cicero]			
<i>ad Her</i>		Dexippus	
IV i 1	77 n. 76	<i>in Cat</i>	
		5.2-3	38
Clement of Alexandria		5.7-12	xi n. 11
<i>strom</i>		6.10-13	56
V xii 81.5	31	6.23-26	70 n. 60
VIII vi 20.1	132	10.25-32	70

Dexippus (<i>cont.</i>):		86.27–28	192 n. 100
<i>in Cat (cont.):</i>		98.30–31	173
11.1–16.13	72		
12.29–13.1	72	[Elias]	
14.27	76	<i>in Isag</i>	
14.32–34	63	xv 18–20	90 n. 112
26.8–12	328	xx 3	70 n. 61
26.29–31	243 n. 8	34	54 n. 13
30.20–30	98, 345	xxv 3–5	xvi
34.19–21	313	xxvi 1–3	xvi
40.20–22	37 n. 61	xxvii 10	xii n. 14
43.19–20	326	xxxi 7–9	61
48.10–11	224	xxxiii 29	105 n. 35
48.11–19	173	xxxvii 12	xvi
56.4	40 n. 74	xxxviii 1–6	78 n. 81
		20–22	341
Diomedes		xxxix 30–33	154 n. 2
<i>ars gramm</i>		34	161 n. 19
iii [GL I 501.16–17]	106 n. 41	xl 23–24	174
		xlii 26	188
Diogenes Laertius		xlvi 25–26	247
VII 58	281, 315	xlvii 31	174
60	43, 64, 115, 214, 314	li 22	294
61	98, 106, 131, 314	33	264
101	173	Epicurus	
135	42 n. 78	<i>ad Hdt</i>	
160	33 n. 44	62	343
IX 91	41 n. 77	68–69	343
Dionysius of Halicarnassus		Eunapius	
<i>Thuc</i>		<i>VS</i>	
24 [362.4]	266 n. 14	III i 5 [455]	ix
Dionysius Thrax		IV i 3 [456]	x
12 [24.2–6]	215, 321	i 4 [456]	x n. 4
[33.6–34.2]	315	i 10–11 [456–457]	xxiii
[43.1–44.1]	64, 98 n. 19	Euripides	
Elias		<i>frag 15</i>	93
<i>in Cat</i>		Eusebius	
166.35–167.2	272	<i>PE</i>	
<i>in Isag</i>		X iii 1	x n. 4
36.1–3	78 n. 78	XV iv 10	336
39.6–8	23, 338	Galen	
39.8–19	24	<i>caus puls</i>	
41.18–19	xv n. 27	IX 4	220
47.27	38 n. 59	<i>comp med loc</i>	
51.23–27	50 n. 1	XIII 191	107
60.13–19	90	<i>diff feb</i>	
77.3–5	177 n. 64	VII 275	174
79.11	xix	<i>diff puls</i>	
79.27–28	173	VIII 625	
80.30–32	176		163

629–630	156	Herodian	
632	155, 353	<i>decl nom</i> III ii	
734	112	660.35–661.5	298 n. 4
<i>ad Glauc</i>			
XI 3–4	130	Iamblichus	
4	129–130	<i>apud Simplicius, in Cat</i>	
<i>in Hipp Epid</i>		146.32–147.1	335
XVIIA 364	xxiii	<i>comm math sc</i>	
<i>inst log</i>		xii [45.24–46.1]	136
ii 4	151	<i>protr</i>	
iii 2	40	xxi [121.18–20]	208 n. 22
<i>lib prop</i>			
XIX 8–9	xiv n. 24	Isidore	
11	xiii n. 21	<i>etym</i> II xxiii 3	xv n. 29
38	xiv n. 24		
<i>adv Lyc</i>		Isocrates	
XVIIA 209	129	<i>frag</i> 24	87 n. 102
<i>meth med</i>			
X 23–24	182	Jerome	
145	33	<i>ep</i>	
155	40	50.1	ix
734–735	108	121.10	xiii n. 21
<i>oss ingred</i>			
II 739	157	John of Damascus	
<i>PHP</i>		<i>dial</i>	
V 753	130	6	341 n. 40
775	201	10	132
804	342		
<i>in Tim</i>		John Doxopatres	
frag 2.64	106	<i>in Aphth proggmn</i>	
		131.3–6	334
[Galen]			
<i>ad Gaur</i>		Julius Victor	
iii 1	161 n. 19	<i>rhet</i>	
xiii 1	70 n. 62	vi 2 [398.19–27]	252
		[398.29–30]	207 n. 17
Gellius			
I ii 6	xii n. 18	Longinus	
IV i 10	28	<i>apud Porphyry, v Plot</i>	
XVI viii 1	xiii	xix 11–13	xi n. 9
		xx 57–59	xviii
Heliodorus			
<i>GG</i> I iii		Lucian	
385.15–23	93 n. 1	<i>salt</i>	
397.5–8	98	22	106
		<i>vit auct</i>	
Hermias		26	
<i>in Phdr</i>			199 n. 122
172.14–16	329 n. 17	Lucretius	
		I 449–458	356
Hero			
<i>metr</i>		Macrobius	
3.6–7	25 n. 10	IV 361	68

Martianus Capella		38.1-4	43
IV 346	158	101.1-5	224
347	232		
V 480	232	[Philoponus] <i>in Isag</i>	
Nemesius		10a33-34	xii n. 14
<i>nat hom</i>		11a34-35	24
iii 139-140 [43.3-8]	354	11b1-2	59 n. 30
		11b8-15	24
New Testament		11b48-12b2	95
Matthew			
xv 2	33 n. 46	Photius <i>bibl</i>	
Nicomachus		cod 251, 461a24-37	338
<i>encl harm</i>			
i	32	Pindar <i>Pyth</i>	
<i>introd arith</i>		viii 95-96	
I iv 2	298 n. 5	Plato	
2-v 2	363	<i>Alc I</i>	
3	298 n. 5	130D	280 n. 7
4	251, 298 n. 5	<i>Ep VII</i>	
5	263	343BC	90
v 2-3	298 n. 5	<i>Euthyp</i>	
Olympiodorus		11A	
<i>in Alc</i>		<i>Meno</i>	90
xxiv [204.5-12]	342	71B	
<i>in Cat</i>		<i>Parm</i>	90
66.36-38	237	127A	26
Paul of Alexandria		129C	26, 46
<i>praef 1.6-7</i>	xiv n. 24	130BC	46
		148C	346
Papyri		161A	346
PHaun 1	221	162D	346
PSI 1095, frag 1, II 5-9	212	163D	346
		164A	157
Philo		164B	164
<i>leg alleg</i>		<i>Phdr</i>	
ii 86	117	249B	135
		266B	128
Philoponus		<i>Phlb</i>	
<i>in APst</i>		16E	130
94.5-6	233 n. 37	<i>Ph</i>	
437.17-19	152 n. 150, 343 n. 46	102BD	328
<i>in Isag</i>		104E-105A	163 n. 78
178.9-11	24	<i>Plt</i>	
203.10-26	99 n. 20	263B	329
203.36-37	62	265DE	283-284, 289 n. 7
204.9-13	95 n. 9	287C	132
204.30-205.2	95 n. 9	<i>Rep</i>	
205.16-22	99 n. 20	353D	206
<i>in An</i>		614C	54

<i>Soph</i>		<i>E apud Delph</i>	
216A	54	393B	344
<i>Thet</i>		<i>quaest conv</i>	
157BC	343	636CD	257 n. 5
165A	41 n. 75	732BC	174
181DE	346	<i>sollert anim</i>	
208D	199	959F–963F	111
209C	343 n. 47	<i>Stoic rep</i>	
<i>Tim</i>		1071F–1072A	297
31BC	136		
<i>Plotinus</i>		<i>Pollux</i>	
<i>enn</i>		VI 200	208 n. 22
I iii 4.1–4	236		
II vi 1.18–22	66	<i>Pompeius</i>	
3.4–6	151 n. 147	<i>comm</i>	
III i 2.17–19	116 n. 70	[<i>GL V</i> 201,10–11]	223 n. 12
VI i–iii	336–338	<i>Porphyry</i>	
i 1.8–9	133	<i>abst</i>	
2.15–16	214	II 4	33
3.3–4	53	III 1	xviii
4.17–20	324	7	174
6.21–35	62	21–23	110–111
10.20–24	352	IV 17	55
14.9–17	324	<i>ad Aneb</i>	
25.1–5	118, 312	i 2c	177 n. 63
25.16–21	334	5	36 n. 58
30.19–20	313	ii 2ef	27
ii 2.12–13	99	5c	41 n. 75
8.43	107	18b	33
22.16–17	107	<i>ad Gedal</i>	
iii 3.3–5	45 n. 85	47	70
5.18–22	327	50	72
6.25–26	35 n. 85	51	58
8.19–23	343	54	54 n. 14
8.30–37	344, 354–355	55	222, 230–231
9.27–30	136	58	351 n. 61
9.36–40	272, 275	70	59
14.7–35	94	74	124
14.20–21	41	<i>ad Marc</i>	
14.30–31	352	iv	x
15.24–25	343	<i>an fac</i>	
		251	34
		<i>ant nymph</i>	
		6	138
<i>Plutarch</i>		<i>in Cat</i>	
<i>adv Col</i>		55.8–9	56
1115E	36 n. 60	56.5–13	69, 69 n. 59
<i>Alex</i>		56.28–29	37
vii [668CD]	36	56.34–57.12	69, 76
<i>an procr</i>		58.7–12	127
1023E	336	58.32–37	72 n. 65
<i>comm not</i>		59.10–33	37, 70, 106 n. 41
1081F	40		

Porphyry (<i>cont.</i>):			
<i>in Cat (cont.):</i>			
60.2-4	29	118.4-6	250
61.10	121 n. 86	118.24-119.3	250
62.1-4	320	119.33-37	244
63.20-22	142	124.4-14	360
65.4-7	51 n. 6	124.15-125.5	52 n. 9
66.17-18	123	125.25-28	223
70.31-71.15	72-73, 322	127.22-25	xvii n. 35
71.30-33	79	128.1-15	96
73.22-27	231	128.20-25	51
75.5-6	51	129.9-10	151
75.19-20	94	132.20-133.6	95
75.25-29	27	133.14-16	93
76.1-8	80 n. 86, 326	134.28-29	36
77.27-28	114	135.26-27	236
78.16-20	231	137.25-138.6	173 n. 50
79.27-31	232	138.30-32	44 n. 84
80.5-8	84	<i>in Int</i>	
80.20-23	87	71 n. 64, 220	
81.4-7	359	80	35
81.34-82.4	358	87	325
82.5-6	358	90	325
82.10-14	29	93a	325
82.14-22	50	100	35
82.25-29	192	<i>in Phys</i>	
82.29-32	353	120	46, 92
82.33-37	193	129	39, 48, 120,
83.18-23	100	353	122, 151 n. 149
83.35-84.1	104	4.23-24	33
85.18-20	108	4.24-5.8	xviii
87.16-21	116	5.8-9	xviii
89.5-6	61	5.15-16	xviii
89.13-17	326	8.6-16	60 n. 33, 106
90.12-91.5	271	11.19-24	60 n. 32
90.15	272-274	22.23-24	xiv n. 24
90.32-33	40 n. 74	25.3-4	xiv n. 24
91.28-29	100	33.13-15	172
93.25-94.1	138	37.10-11	40 n. 73
93.31-94.10	61	67.6-8	280 n. 16
94.10-13	29	79.9-10	133
94.37-95.3	202	127.28-29	39 n. 70
95.6-7	216	<i>in Ptol tetrab</i>	
95.17-20	326	i [190.18-21]	32
95.22-27	198	<i>in Soph</i>	
95.33	351	169	34
97.12-13	223	<i>in Tim</i>	
99.22-26	176	223	102
101.4-12	190	frag 55	
103.11-17	183-184	<i>nost potest</i>	
105.13-17	40 n. 74, 42	268	23
106.26-27	239	271	23
117.27-31	111	<i>phil hist</i>	
	291	200	53 n. 12
		111	<i>philolog</i>
		408	x n. 4

<i>reg anim</i>		Quintilian	
300	280 n. 6	V v 56–57	252
<i>quaest Hom</i>		x 55	31
praef 1.11	24 n. 6	58	206
<i>quaest Hom Iliad</i>		61	207 n. 17
XXIV 200 [189.5–21]	128 n. 105	VII i 59	259 n. 10, 262 n. 1
221 [269.15–270.6]	137 n. 118		
<i>quaest Hom Od</i>		scholia	
VIII 583 [80.16–18]	53	to Dionysius Thrax	
<i>scire te ipsum</i>		GG I iii	
274	321	114.8–12	324 n. 11
<i>sent</i>		115.21–22	28
3	44 n. 84	115.29–116.12	60 n. 33
5	44 n. 84	117.1–6	86
11	137	117.6–7	90 n. 14
19	39, 41 n. 75	117.10–13	197
32	50 n. 4	117.14–27	228
36	136–137, 298	118.3–4	206
37	40 n. 74	120.5–8	275
42	39, 40 n. 74	121.26–29	209
44	40 n. 74	121.29–39	217–218
<i>symm zet</i>		361.1–11	216 n. 38
260	354	361.18–23	52 n. 8
<i>syn rhet</i>		363.28–32	93 n. 1
417	89	517.28–31	140
<i>v Plot</i>		524.8–12	315 n. 2
i 3–4	54	551.34–552.6	93
iv 1–2	x n. 4	to Hermogenes	
6–9	x n. 4	<i>stas</i>	89
v 51–60	336	to Homer	
vi 1–3	x n. 4	<i>Iliad</i> V 638	164 n. 22
xi 11–19	xi n. 9		
xiv 4–7	312, 327	Seneca	
10–14	34	<i>ep</i>	
xv 1–6	x n. 4	lviii 8	117
xvi 1–3	24 n. 6	11–15	117
xvii 6–15	x n. 4	16	140
		18–19	128 n. 104
Posidonius		Sextus	
frag 16	42 n. 78	<i>M</i>	
		IV 7	46
Probus		VII 246	190
<i>in Isag</i> 148.8	xii n. 14	269	344
		270–271	357
		276	344
Proclus		277	344
<i>in Eucl</i>		281–282	344
80.15–18	42 n. 78	VIII 47	263
<i>in Parm</i>		59	140 n. 126
635.2–12	30 n. 33	348	140
<i>in Tim</i>		453	41
I 440.10–16	102	X 219–222	357
III 95	41 n. 76	269	363

Sextus (<i>cont.</i>):		79.23–29	328
<i>M</i> (<i>cont.</i>):		79.30–80.4	328
XI 22–30	316	82.7–9	47 n. 89
<i>PH</i>		82.22–25	272
I 138	104	85.23–27	87 n. 104
216	321	93.10–15	202
II 15	155–156	98.13–17	289
213	341	98.22–25	355
219	42	104.10–14	36 n. 59
223–227	188–190	113.24–27	207
III 27–28	96	119.26–30	60
		136.6–7	183 n. 79
		146.32–147.1	325
[Sergius]		153.3–5	95 n. 6
Furlani, 'Sergio', p.39	109 n. 52	175.17–19	237 n. 7
Simplicius		181.35–182.3	207
<i>in Cat</i>		191.24–32	362
1.4–6	xv	207.27–208.21	xvii n. 35
2.5–9	35	212.19–20	316
2.7–9	312	213.8–28	59
2.10–11	xi n. 11	216.12–19	41
2.15–16	336 n. 26	229.7–11	27 n. 19
2.28–29	xi n. 11	285.26–28	175
3.4–5	33 n. 43	298.27–38	64 n. 46
3.13–17	32	306.25–27	316
9.6–7	72 n. 66	360.28–361.6	324
11.23–29	70	404.10–13	322
17.22–24	326	415.3–4	124
21.7–9	72 n. 66	419.25–27	248
30.13–15	58	428.31–429.1	346
32.5–8	123 n. 90	<i>in Ench</i> 2.24–25	xviii n. 58
38.1–6	54 n. 14	<i>in Phys</i> 10.31–32	93
43.15–16	222 n. 10	10.32–35	46
43.20–25	324	93.10–11	48
48.21–26	222, 230–231	94.5–13	120, 122
51.11–13	345 n. 51	94.19–23	151 n. 149
51.13–18	326	94.24–25	39
51.30–52.9	360	94.28–29	122
52.16–18	327, 359	120.12–17	294
53.6–9	328		
53.27–28	41 n. 76	[Soranus]	
54.8–13	360	<i>quaest med</i>	
54.16–21	360	21 [251.8–9]	xiii n. 20
55.2–5	152		
55.27–56.10	102–103	Stobaeus	
56.6–10	193	<i>ecl</i>	
61.21–22	335	I xii 1b	93
62.4–5	231	xlix 24	34
62.7–9	335 n. 29	1 30	139
71.10–72.5	334	II viii 39	23
76.13–17	337	42	23
78.4–5	336	III xxi 27	321
78.18–24	351 n. 61		

Suda		<i>Met</i>	
s.v. <i>Πορφύριος</i>	xii n. 17, xiv, 39 n. 70,	4a13-18	298 n. 6
338, 339			
s.v. <i>Ὑπόστασις</i>	344	Trophonius <i>proleg</i>	
Syrianus		2.10-14	281 n. 10
<i>in Met</i>		8.16-22	281 n. 10
95.10-13	339	9.18-26	87 n. 102
106.8-13	139	12.5-8	xii n. 14,63
Themistius		Victorinus	
<i>in An</i>	47, 64 n. 44	<i>adv Ar</i>	
3.32-37		IV 19	39
Theo of Smyrna		<i>def</i>	
1.13-16	32	8.34-9.5	xx n. 45
Theophrastus		9.9-15	xx n. 45
frag		12.15-20	118 n. 75
88	323	<i>in rhet Cic</i>	
124A	30 n. 33	I 5 [171.6-12]	52 n. 8
124B	30 n. 33	22 [211.25-33]	118 n. 75, 334 n. 24
125	88	[211.35-212.17]	228 n. 22
133	85	Xenocrates	
Appx 2	212	frag	
		121	260

GENERAL INDEX

The Greek alphabet precedes the Roman.
For ancient authors see the Index of Citations.

ἄθροισμα 152, 342
αἰσθητός 45–46
ἀκατάτακτος 328
ἀλλοῖος 164, 345–348
ἀλλοίωσις 346
ἄλλος 164, 345–348
ἄνεσις 172, 316–317
ἀντικατηγορεῖν 209–210, 266
ἀντιστρέφειν 142, 209–210
ἀπλούς 50, 72
ἀποδιδόναι 57, 94 n. 4
ἀποτελεῖν 180
ἀρχαῖοι 33–34, 317–319
ἄτομος 78, 112, 151
ἀφορίζειν 57
γενικώτατος 314
γένος 26–27
διαιρέσις 341
διαιρετικός 177–178
διαμορφῶν 93, 257
διαφορά 26, 156–157
εἰδικώτατος 314
εἰδοποιεῖν 93, 161, 195
εἶδος 26–27, 136, 138
εἰσαγωγή xiii
ἐπεισοδιώδης 298
ἐπιδιαιρέσις 183
ἐπίνοια 40–41, 251
ἐπίσης 263–264, 291–292
ἐπίτασις 172, 316–317
ἐπιτηδειότης 199–200
ἐπουσιώδης 298
ἐτεροίος 164, 345–348
ἐτερος 164, 345–348
ἰδιαιτατα 155–156
ἴδιον 26, 205
ἴδιότης 60 n. 33, 151
ἴδιως ποιόν 315
καθ' αὐτό 170–171
καθ' ἔκαστον 78
κατατεγμένος 328
κατηγορεῖν 30 n. 30, 69–70
κατηγορία 26 n. 16
κολοβός 285
λογικώτερον 35–36
μερισμός 341
μέρος 339–340
κατά μέρος 78
μετέχειν 138
μετουσία 136, 137–138
ὅρος 57–58, 294
οὐσία 90, 109, 270 n. 5
παλαιός 33–34, 317–319
παράδοσις 33 n. 46, 303 n. 7
παρουσία 279
περιέχειν 114
περισσεύειν 187
πλεονάζειν 261
ποιόν 281–282, 302–303, 350, 351 n. 60
προηγουμένως 239
προσεχής 112
πρός τί πως ἔχειν 52 n. 9, 312–313
προέπινοεῖν 297
προϋπάρχειν 257 n. 5, 297
προϋποκείσθαι 257 n. 5
προϋφίστασθαι 257 n. 5
πως ἔχειν 312–313
σημαινόμενον 50–51
στοχάζεσθαι 33
σύγχυσις 317
συλληπτικός 136–137
συμβαίνειν 203–204
συμβεβηκός 26, 220–221
σύμμετρος 33
συμπλοκή 322
συμπληρωτικός 179–180
συναγωγός 136–137
συναιρεῖν 137–138

συναναιρεῖν 248–249
 συνεισάγειν 248–249
 συνεπιφέρειν 248–249, 363 n. 78
 συστατικός 179–180
 σχέσις 52 n. 9

τέμνειν 112
 τί ἐστι 85–92
 τὸ ὅλον τοῦτο 194 n. 107

ὑπαλλήλος 108, 115 n. 67
 ὑπάρχειν 40
 ὑπογραφή xiii n. 21, 57–58, 314
 ὑποκείμενον 67
 ὑπόστασις 40
 ὑπερογενής 297–298
 ὑφίστασθαι 40

ψιλός 41 n. 75

accidents 26, 203–204, 220–235,
 269–278, 288–290, 295–303,
 356–358
 common 80 n. 85
 convertible? 301, 302
 individual 80 n. 86
 inseparable 159–161, 224–228, 288,
 289, 356–357
per se 58, 160–171, 221–222, 225–226,
 241
 primarily of individuals 239–241, 247,
 270–271
 subsist in a subject 230–232

Alexander of Aphrodisias 195–196,
 210–211, 273
 on the five items 31
 and Porphyry 34, 53 n. 12
 on universals 43, 47, 47 n. 89, 329

ambiguity, *see: homonymy*

Ammonius xx n. 47

Anatolius 24 n. 6, 32

Andromicus 34, 129, 360

angels 198 n. 117, 244 n. 9

Antipater 214

Archigenes 353

Archytas 336 n. 26

Arethas xxi–xxii, 228

Ariston 297

Aristotle's rule 50 n. 1, 220

article, definite 319–320

Athenodorus 35, 70

Atticus 336

augmentation, *see: 'the more and the less'*

Boethius xi n. 10, xi–xii, xx, xx n. 47,
 xxii n. 56, 38 n. 66, 132–133, 182
 Boethus 60, 70

calculus of classes 147–148

categories

- Stoic 312–314
- see also: predication, ten types of*
- Christians x, xi, 24, 33 n. 46, 101 n. 26,
 198 n. 117
- Chrysorius 23–24, 33
- Chrysippus 35, 129, 139, 214, 297
- Cleanthes 213, 280 n. 7
- collection 64, 135
- the Common Man 136, 138–140
- see also: universals*
- conceivability 226–228, 234–235, 250–253
- see also: modality*
- concepts, formation of 274–275
- conversion 142, 209–211, 266–267, 287,
 291, 302
- Cornutus 35, 70
- counterpredication, *see: conversion*
- David xxi
- definition
- circular 95–97, 186–187
- complete 100
- conjunctive 98 n. 14
- and delineation 58–62, 293–294
- and existence 103–104
- by genus and difference 28, 91–92, 131,
 308
- kinds of 60 n. 32
- negative 229, 304
- and property 214
- and 'What is it?' 88, 90, 281 n. 10
- delineation 57–62, 96, 186–187, 201–202,
 294, 314
- Demetrius of Laconia 140, 357
- Dexippus xxi n. 11, 337
- differences 26, 155–200, 242–254,
 279–290
- as accidents 163, 348 n. 54
- categorial status of 350–356
- co-extensive with their species?
 191–193, 246–247
- conjugations of 177–182, 183–186, 195,
 283, 304
- constitutive 179–180
- divisive 177–179
- entail their genera? 182, 348–350
- as general 88, 307
- per se* 168–172

and qualities 350–356
said of several species 191–193
specific 161–164, 166–167
diminution, *see*: ‘the more and the less’
Diogenes of Babylon 281
diversity 157–158, 165–167, 345–348
division 28, 112, 126, 128–141
complementary 183–185, 254
dichotomous 132–133, 184–185
kinds of 341–342
utility of 128–130

Elias xxi n. 51, 24 n. 8
Epicurus 60 n. 33, 140, 280 n. 7, 343, 356–358
equality, *see*: conversion; ‘the more and the less’
Eudemus xx n. 47, 30, 33, 34
existence 40, 116–117
not a genus 118–124, 329–336
and thought 40–43
extensionalism 142–143, 147–148

the five items xii–xiii, 26–27
and Aristotle’s four 30–32, 73, 303–308
and five questions 90 n. 112
history of 29–32, 230
as modes of predication 65–66
order of 27–28
system of 308–311
utility of 28–29

focal meaning 121–123
‘for the most part’ 102–103, 193, 208, 224, 286

form, *see*: matter

genealogy 116
genera 26–27, 50–92, 242–278
defined 77
highest 104–108, 113–114, 261, 314
kinds of 50–56
not predicated of differences 230–232
proximate 112, 254
subaltern 108, 115 n. 67

grammarians 64, 67 n. 52, 71 n. 64, 98, 163, 315 n. 2

Herminius 37, 70, 180
Hierocles 338
homonymy
of the five items 50–52, 61, 155–156, 163, 201
and genera 119–122, 125

Iamblichus xi n. 11, 32, 103, 193
Ideas, Platonic 45 n. 85, 46, 136, 139, 334, 336
identity 81 n. 89, 166, 279–280, 345
illustrative examples 77 n. 76, 94, 110–111, 199, 228–229
incorporeality 39, 111, 137
individuals 45–46, 70 n. 61, 112–113, 150–154, 228, 314–316, 325–329, 341 n. 42, 342–345
infinity of 46, 127–128, 133–135
knowledge of 133–135
primacy of 270–276, 299
undefinable 61 n. 34
see also: predicates, singular; proper name
infinity 126–128, 133–135
Innsbruck, Claus of 257

Introduction:
and *Categories* xi n. 9, xiv–xv, 23, 25–26, 29, 36–37, 120 n. 85, 142, 145
commentaries on xv n. 29, xx–xxii
date of xi, 29, 203 n. 5
sources for xviii–xix, 30–32, 34–35, 34 n. 50, 53 n. 12, 57, 91, 152, 199, 229
structure of xvi–xviii, 29, 237
subtitles in xvii–xviii
text of xix–xxii
title of xii–xiii, xv
translations of ix, xx
introductions xiii–xiv, xxiii n. 58, 32–33, 168 n. 34

laughing 208–209, 264 n. 8, 286, 291, 293
logic xv–xvi, 35–36, 52, 201
Longinus x n. 4, 34
Lucius 35, 180

matter 88, 93–94, 134 n. 113, 167, 194–196, 254, 257–258, 343–344
Megarics 294
mereology 148–150
metaphysics? 36–37, 115, 136–141, 180, 190–191, 271–276, 279
metempsychosis 279–280
mixture 289–290, 317
Mnesitheus 129, 130–131
modality 215, 224, 225–228, 249–251, 301
‘the more and the less’ 142–143, 172–174, 263–264, 270, 289–290, 291–292, 316–317

mules 283–284
 mutilation 285–286

names for expressions 68–69, 319–322
 ‘by nature’ 197, 208 n. 20, 226, 285–286

Nicomachus 32, 251
 Nicostratus 35, 111 n. 57, 123
 ‘no genus of everything’ 116–124

Old Masters 33–34, 317–319
 ordered series 111, 332–336
 other 164–167, 345–348

participation 136, 138
 parts and wholes 114, 148–150,
 151 n. 149, 260, 339–342
 past tense for present 87 n. 102
 perception 45–46
 Peripateticism xix, 34, 46–47, 189 n. 94,
 343
per se 170–171
 Philoponus xxi
 Plato xix, 24, 90, 116–117
 on division 130–133
 on existence 116–117
 reconciled with Aristotle 122 n. 88,
 125, 189 n. 94, 272 n. 10, 337–339
 Platonism 34 n. 50, 46–47, 136–141,
 189 n. 94, 260 n. 11, 272, 307 n. 14,
 343–344
 Plotinus 24 n. 6, 34, 38, 53, 118, 236,
 336–337
 Plutarch xxviii, 336
 Porphyry
 life of ix–x, xi n. 9, 23–24
 philosophy xii
 and Plotinus x, xi n. 9, xii, 53,
 337 n. 28
 style of xvi, xxiii–xxiv
 works of x–xii, 23, 338–339
 see also: Introduction
 potentiality 188–189, 191, 247–248, 293
 Posidonius 41 n. 77, 315 n. 3
 predicates, *see: the five items*
 predicates 69–73, 360
 in the *Categories* 69–70
 entities or expressions? 68–70
 simple 72–73, 308, 322–325
 singular 78–80, 325–329
 and verbs 70 n. 61, 71, 74
 predication 66–77, 238–239
 natural 238, 327 n. 15
 nominal 243–244, 359–360
 specific 161–162, 163–164, 169
 ‘of a subject’ 326–327, 358–360
 of substances 334–336
 synonymous 261, 264–265, 326–327,
 358–361
 ten types of 26 n. 16, 28, 73, 89, 105,
 123–124, 336–339
 construed as genera 64 n. 46, 124–125
 theses on 141–147
 transitivity of 141–142, 242–243,
 358–361
 pre-existence of genera 167, 256–260,
 265, 293, 296–299
 priority 248–253, 256, 265, 269
 causal 258, 299
 in thought 296–297
 kinds of 258, 334–336
 natural 248
 rules of 248–250, 260, 267–268,
 282–283, 361–364
 Probus xxi
 proof 28, 45–46, 79 n. 82, 95 n. 9
 proper feature 151–152, 315–316
 proper name 70 n. 61, 79–80, 152–154,
 281, 314–316, 325
 conjunctive 72–73
 predicated 75–76, 79–80
 properties 26, 58–59, 82–85, 89, 201–219,
 262–268, 285–287, 291–294,
 301–303
 and accidents 309–310
 and consequences 215–216
 and differences 206–207
 kinds of 201–203
 relative 216–218, 236
 restricted to lowest species? 262–263
 restricted to species 82–83, 204–205,
 262–263, 292
 qualities, substantial 223, 350–352
 quantifiers 240
 questions 85–91, 277 n. 15, 313
 Quintilian 32
 rationality 110–111, 173–174, 185–186
 relations 52 n. 9, 61–62, 65–66, 95–96,
 223, 312–313
 reflexive 157
 removal 101, 244–245, 248–250, 262
 rhetoricians 63, 89, 98, 232
 science 128, 129–130, 133–134,
 134 n. 112, 221

self-predication 83–84
 Severus 117 n. 74
 shape 93
 something 43, 117–118, 118 n. 76, 123
 soul 280 n. 7
 species 26–27, 93–154, 255–261, 279–284,
 291–300
 most special 81, 82–83, 98–99,
 104–108, 113–114, 184–185, 261,
 314
 finite number of 126–127
 with no members 64, 103–104
 with one member 64, 100–103
 Stoics 42 n. 78, 43, 62 n. 36, 64, 68 n.
 53, 98, 106 n. 42, 117–118, 138, 139,
 152, 153, 173, 220, 281
 not Old Masters 34, 317–319
 source for *Isag?* 35, 91 n. 116, 106,
 312–317
 Strato 34
 subject 58–59, 71, 108–111
 entities or expressions? 71–72
 subsistence 40
 substance 53, 90, 175 n. 55, 231–232,
 270 n. 5, 271–272, 334–335,
 351 n. 61, 354–355
 sun 80, 101–103, 272
 Symmachus 24
 Taurus xix, 24
 taxonomy 27 n. 20
 Theodorus Prodromus xxii
 Theophrastus xviii n. 40, 30, 34, 129,
 138 n. 123
 titles xii–xiii, xvii n. 35, xvii–xviii, 25–26,
 70 n. 60
 tree of Porphyry 109–110, 184
 triangles 94–95
 universals 37–49, 76–77, 76 n. 73,
 138–139
 assigned 102–103, 328–329
 in us 328–329
 three sorts of 44, 189 n. 94
 variables 79
 Victorinus xx, xx n. 45, 39,
 60 n. 32, 118 n. 75, 194 n. 107,
 334 n. 24
 what is it? 55, 59, 63, 85–92, 98–99,
 131–132, 281–282, 304
 what is it like? 85–86, 90–91
 what sort of? 85–86, 90–91, 101, 193–194,
 281–282, 350–351, 351 n. 60
 Xenocrates 34, 260